Public Law 95-95
95th Congress

An Act

To amend the Clean Air Act, and for other purposes.

Aug. 7, 1977
[H.R. 6161]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Clean Air Act Amendments of 1977.

SHORT TITLE AND TABLE OF CONTENTS

SECTION 1. This Act, together with the following table of contents, may be cited as the "Clean Air Act Amendments of 1977".

42 USC 7401 note.*

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*The Clean Air Act which was formerly classified to 42 USC 1857 *et seq.* has been transferred and is now classified to 42 USC 7401 *et seq.* Marginal citations to the U.S. Code for sections of the Clean Air Act in this slip law are to the new classifications. For former classifications of the Clean Air Act, consult the Tables volume of the U.S. Code.

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TITLE I—AMENDMENTS RELATING PRIMARILY TO TITLE I OF THE CLEAN AIR ACT

TRAINING

Grants.
42 USC 7403.

SEC. 101. (a) Section 103(b) of the Clean Air Act is amended by striking out paragraph (5), redesignating the following paragraphs accordingly, and adding the following at the end thereof: "In carrying out the provisions of subsection (a), the Administrator shall provide training for, and make training grants to, personnel of air pollution control agencies and other persons with suitable qualifications and make grants to such agencies, to other public or nonprofit private agencies, institutions, and organizations for the purposes stated in subsection (a)(5). Reasonable fees may be charged for such

Fees.

States in carrying out their functions under part C of title I of the Clean Air Act (relating to prevention of significant deterioration of air quality) with respect to pollutants, other than sulfur oxides and particulates, for which national ambient air quality standards are promulgated. Such guidance document shall include recommended strategies for controlling photochemical oxidants on a regional or multistate basis for the purpose of implementing part C and section 110 of such Act.

Ante, p. 731.

Ante, pp. 691-696.

(d) Not later than two years after the date of enactment of this Act, the Administrator shall complete a study and report to the Congress on the progress made in carrying out part C of title I of the Clean Air Act (relating to significant deterioration of air quality) and the problems associated with carrying out such section, including recommendations for legislative changes necessary to implement strategies for controlling photochemical oxidants on a regional or multistate basis.

Study, report to Congress.
42 USC 7470 note.

VISIBILITY PROTECTION

SEC. 128. (a) Part C of title I of the Clean Air Act, is amended by adding the following new section after section 168:

"SUBPART 2

"VISIBILITY PROTECTION FOR FEDERAL CLASS I AREAS

42 USC 7491.

"SEC. 169A. (a) (1) Congress hereby declares as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from manmade air pollution.

Review, consultation.

"(2) Not later than six months after the date of the enactment of this section, the Secretary of the Interior in consultation with other Federal land managers shall review all mandatory class I Federal areas and identify those where visibility is an important value of the area. From time to time the Secretary of the Interior may revise such identifications. Not later than one year after such date of enactment, the Administrator shall, after consultation with the Secretary of the Interior, promulgate a list of mandatory class I Federal areas in which he determines visibility is an important value.

Revision.
List.

Study, report to Congress.

"(3) Not later than eighteen months after the date of enactment of this section, the Administrator shall complete a study and report to Congress on available methods for implementing the national goal set forth in paragraph (1). Such report shall include recommendations for—

Recommendations.

"(A) methods for identifying, characterizing, determining, quantifying, and measuring visibility impairment in Federal areas referred to in paragraph (1), and

"(B) modeling techniques (or other methods) for determining the extent to which manmade air pollution may reasonably be anticipated to cause or contribute to such impairment, and

"(C) methods for preventing and remedying such manmade air pollution and resulting visibility impairment.

Such report shall also identify the classes or categories of sources and the types of air pollutants which, alone or in conjunction with other sources or pollutants, may reasonably be anticipated to cause or contribute significantly to impairment of visibility.

Regulations, notice and hearing.

"(4) Not later than twenty-four months after the date of enactment of this section, and after notice and public hearing, the Administrator shall promulgate regulations to assure (A) reasonable progress toward

meeting the national goal specified in paragraph (1), and (B) compliance with the requirements of this section.

"(b) Regulations under subsection (a)(4) shall—

Guidelines to States.

"(1) provide guidelines to the States, taking into account the recommendations under subsection (a)(3) on appropriate techniques and methods for implementing this section (as provided in subparagraphs (A) through (C) of such subsection (a)(3)), and

"(2) require each applicable implementation plan for a State in which any area listed by the Administrator under subsection (a)(2) is located (or for a State the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area) to contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal specified in subsection (a), including—

Emissions control retrofit technology.

"(A) except as otherwise provided pursuant to subsection (c), a requirement that each major stationary source which is in existence on the date of enactment of this section, but which has not been in operation for more than fifteen years as of such date, and which, as determined by the State (or the Administrator in the case of a plan promulgated under section 110(c)) emits any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area, shall procure, install, and operate, as expeditiously as practicable (and maintain thereafter) the best available retrofit technology, as determined by the State (or the Administrator in the case of a plan promulgated under section 110(c)) for controlling emissions from such source for the purpose of eliminating or reducing any such impairment, and

Ante, p. 694.

"(B) a long-term (ten to fifteen years) strategy for making reasonable progress toward meeting the national goal specified in subsection (a).

In the case of a fossil-fuel fired generating powerplant having a total generating capacity in excess of 750 megawatts, the emission limitations required under this paragraph shall be determined pursuant to guidelines, promulgated by the Administrator under paragraph (1).

Exemption, notice and hearing.

"(c)(1) The Administrator may, by rule, after notice and opportunity for public hearing, exempt any major stationary source from the requirement of subsection (b)(2)(A), upon his determination that such source does not or will not, by itself or in combination with other sources, emit any air pollutant which may reasonably be anticipated to cause or contribute to a significant impairment of visibility in any mandatory class I Federal area.

Applicability.

"(2) Paragraph (1) of this subsection shall not be applicable to any fossil-fuel fired powerplant with total design capacity of 750 megawatts or more, unless the owner or operator of any such plant demonstrates to the satisfaction of the Administrator that such powerplant is located at such distance from all areas listed by the Administrator under subsection (a)(2) that such powerplant does not or will not, by itself or in combination with other sources, emit any air pollutant which may reasonably be anticipated to cause or contribute to significant impairment of visibility in any such area.

Concurrence by Federal land manager.

"(3) An exemption under this subsection shall be effective only upon concurrence by the appropriate Federal land manager or managers with the Administrator's determination under this subsection.

Consultation. Land manager's recommendations, summary. *Ante*, p. 694.

"(d) Before holding the public hearing on the proposed revision of an applicable implementation plan to meet the requirements of this section, the State (or the Administrator, in the case of a plan promulgated under section 110(c)) shall consult in person with the appropriate Federal land manager or managers and shall include a summary of the conclusions and recommendations of the Federal land managers in the notice to the public.

Buffer zones.

"(e) In promulgating regulations under this section, the Administrator shall not require the use of any automatic or uniform buffer zone or zones.

Nondiscretionary duty. 42 USC 7604.

"(f) For purposes of section 304(a)(2), the meeting of the national goal specified in subsection (a)(1) by any specific date or dates shall not be considered a 'nondiscretionary duty' of the Administrator.

Definitions.

"(g) For the purpose of this section—

"(1) in determining reasonable progress there shall be taken into consideration the costs of compliance, the time necessary for compliance, and the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirements;

"(2) in determining best available retrofit technology the State (or the Administrator in determining emission limitations which reflect such technology) shall take into consideration the costs of compliance, the energy and nonair quality environmental impacts of compliance, any existing pollution control technology in use at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology;

"(3) the term 'manmade air pollution' means air pollution which results directly or indirectly from human activities;

"(4) the term 'as expeditiously as practicable means as expeditiously as practicable but in no event later than five years after the date of approval of a plan revision under this section (or the date of promulgation of such a plan revision in the case of action by the Administrator under section 110(c) for purposes of this section);

"(5) the term 'mandatory class I Federal areas' means Federal areas which may not be designated as other than class I under this part;

"(6) the terms 'visibility impairment' and 'impairment of visibility' shall include reduction in visual range and atmospheric discoloration; and

"(7) the term 'major stationary source' means the following types of stationary sources with the potential to emit 250 tons or more of any pollutant: fossil-fuel fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (thermal dryers), kraft pulp mills, Portland Cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incenerators 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 facilities, chemical process plants, fossil-fuel boilers of more than 250 million British thermal units per hour heat input, petroleum storage and transfer

facilities with a capacity exceeding 300,000 barrels, taconite ore processing facilities, glass fiber processing plants, charcoal production facilities.".

NONATTAINMENT AREAS

SEC. 129. (a)(1) Before July 1, 1979, the interpretative regulation of the Administrator of the Environmental Protection Agency published in 41 Federal Register 55524–30, December 21, 1976, as may be modified by rule of the Administrator, shall apply except that the baseline to be used for determination of appropriate emission offsets under such regulation shall be the applicable implementation plan of the State in effect at the time of application for a permit by a proposed major stationary source (within the meaning of section 302 of the Clean Air Act). 42 USC 7502 note. 41 CFR 51.18. *Post*, pp. 761, 769, 770.

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

(A) an inventory of emissions of the applicable pollutant for each nonattainment area (as defined in section 171 of the Clean Air Act) that identifies the type, quantity, and source of such pollutant so as to provide information sufficient to demonstrate that the requirements of subparagraph (C) are being met; Emissions inventory. *Post*, p. 746.

(B) an enforceable permit program which— Permit program.

(i) requires new or modified major stationary sources to meet emission limitations at least as stringent as required under the permit requirements referred to in paragraphs (2) and (3) of section 173 of the Clean Air Act (relating to lowest achievable emission rate and compliance by other sources) and which assures compliance with the annual reduction requirements of subparagraph (C); and *Post*, p. 748.

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

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

The Administrator shall terminate such waiver if in his judgment at the reduction in emissions actually being attained is less than the reduction on which the waiver was conditioned pursuant to subparagraph (C), or if the Administrator determines that the State is no longer in compliance with any requirement of this paragraph. Upon application by the State, the Administrator may reinstate a waiver terminated under the preceding sentence if he is satisfied that such State is in compliance with all requirements of this subsection. Termination. Reinstatement, application.

(3) Operating permits may be issued to those applicants who were properly granted construction permits, in accordance with the law and applicable regulations in effect at the time granted, for construction of a new or modified source in areas exceeding national primary air quality standards on or before the date of the enactment of this Act if such construction permits were granted prior to the date of the enactment of this Act and the person issued any such permit is able to demonstrate that the emissions from the source will be within the limitations set forth in such construction permit. Permits.

(b) Title I of such Act is amended by adding the following new part at the end thereof:

UNITED STATES CODE

2012 EDITION

CONTAINING THE GENERAL AND PERMANENT LAWS
OF THE UNITED STATES ENACTED THROUGH THE
112TH CONGRESS

(ending January 2, 2013, the last law of which was signed on January 15, 2013)

Prepared and published under authority of Title 2, U.S. Code, Section 285b,
by the Office of the Law Revision Counsel of the House of Representatives

VOLUME THIRTY

TITLE 42—THE PUBLIC HEALTH AND WELFARE
§§ 7401–13574

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 2014

76-429v30 D Sig-1

STUDY OF MAJOR EMITTING FACILITIES WITH POTENTIAL OF EMITTING 250 TONS PER YEAR

Pub. L. 95-95, title I, §127(b), Aug. 7, 1977, 91 Stat. 741, directed Administrator, within 1 year after Aug. 7, 1977, to report to Congress on consequences of that portion of definition of "major emitting facility" under this subpart which applies to facilities with potential to emit 250 tons per year or more.

SUBPART II—VISIBILITY PROTECTION

CODIFICATION

As originally enacted, subpart II of part C of subchapter I of this chapter was added following section 7478 of this title. Pub. L. 95-190, §14(a)(53), Nov. 16, 1977, 91 Stat. 1402, struck out subpart II and inserted such subpart following section 7479 of this title.

§ 7491. Visibility protection for Federal class I areas

(a) Impairment of visibility; list of areas; study and report

(1) Congress hereby declares as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from manmade air pollution.

(2) Not later than six months after August 7, 1977, the Secretary of the Interior in consultation with other Federal land managers shall review all mandatory class I Federal areas and identify those where visibility is an important value of the area. From time to time the Secretary of the Interior may revise such identifications. Not later than one year after August 7, 1977, the Administrator shall, after consultation with the Secretary of the Interior, promulgate a list of mandatory class I Federal areas in which he determines visibility is an important value.

(3) Not later than eighteen months after August 7, 1977, the Administrator shall complete a study and report to Congress on available methods for implementing the national goal set forth in paragraph (1). Such report shall include recommendations for—

(A) methods for identifying, characterizing, determining, quantifying, and measuring visibility impairment in Federal areas referred to in paragraph (1), and

(B) modeling techniques (or other methods) for determining the extent to which manmade air pollution may reasonably be anticipated to cause or contribute to such impairment, and

(C) methods for preventing and remedying such manmade air pollution and resulting visibility impairment.

Such report shall also identify the classes or categories of sources and the types of air pollutants which, alone or in conjunction with other sources or pollutants, may reasonably be anticipated to cause or contribute significantly to impairment of visibility.

(4) Not later than twenty-four months after August 7, 1977, and after notice and public hearing, the Administrator shall promulgate regulations to assure (A) reasonable progress toward meeting the national goal specified in paragraph (1), and (B) compliance with the requirements of this section.

(b) Regulations

Regulations under subsection (a)(4) of this section shall—

(1) provide guidelines to the States, taking into account the recommendations under subsection (a)(3) of this section on appropriate techniques and methods for implementing this section (as provided in subparagraphs (A) through (C) of such subsection (a)(3)), and

(2) require each applicable implementation plan for a State in which any area listed by the Administrator under subsection (a)(2) of this section is located (or for a State the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area) to contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal specified in subsection (a) of this section, including—

(A) except as otherwise provided pursuant to subsection (c) of this section, a requirement that each major stationary source which is in existence on August 7, 1977, but which has not been in operation for more than fifteen years as of such date, and which, as determined by the State (or the Administrator in the case of a plan promulgated under section 7410(c) of this title) emits any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area, shall procure, install, and operate, as expeditiously as practicable (and maintain thereafter) the best available retrofit technology, as determined by the State (or the Administrator in the case of a plan promulgated under section 7410(c) of this title) for controlling emissions from such source for the purpose of eliminating or reducing any such impairment, and

(B) a long-term (ten to fifteen years) strategy for making reasonable progress toward meeting the national goal specified in subsection (a) of this section.

In the case of a fossil-fuel fired generating powerplant having a total generating capacity in excess of 750 megawatts, the emission limitations required under this paragraph shall be determined pursuant to guidelines, promulgated by the Administrator under paragraph (1).

(c) Exemptions

(1) The Administrator may, by rule, after notice and opportunity for public hearing, exempt any major stationary source from the requirement of subsection (b)(2)(A) of this section, upon his determination that such source does not or will not, by itself or in combination with other sources, emit any air pollutant which may reasonably be anticipated to cause or contribute to a significant impairment of visibility in any mandatory class I Federal area.

(2) Paragraph (1) of this subsection shall not be applicable to any fossil-fuel fired powerplant with total design capacity of 750 megawatts or more, unless the owner or operator of any such plant demonstrates to the satisfaction of the Administrator that such powerplant is located at such distance from all areas listed by the Administrator under subsection (a)(2) of this section that such powerplant does not or will not, by itself or in combination with other sources,

emit any air pollutant which may reasonably be anticipated to cause or contribute to significant impairment of visibility in any such area.

(3) An exemption under this subsection shall be effective only upon concurrence by the appropriate Federal land manager or managers with the Administrator's determination under this subsection.

(d) Consultations with appropriate Federal land managers

Before holding the public hearing on the proposed revision of an applicable implementation plan to meet the requirements of this section, the State (or the Administrator, in the case of a plan promulgated under section 7410(c) of this title) shall consult in person with the appropriate Federal land manager or managers and shall include a summary of the conclusions and recommendations of the Federal land managers in the notice to the public.

(e) Buffer zones

In promulgating regulations under this section, the Administrator shall not require the use of any automatic or uniform buffer zone or zones.

(f) Nondiscretionary duty

For purposes of section 7604(a)(2) of this title, the meeting of the national goal specified in subsection (a)(1) of this section by any specific date or dates shall not be considered a "nondiscretionary duty" of the Administrator.

(g) Definitions

For the purpose of this section—

(1) in determining reasonable progress there shall be taken into consideration the costs of compliance, the time necessary for compliance, and the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirements;

(2) in determining best available retrofit technology the State (or the Administrator in determining emission limitations which reflect such technology) shall take into consideration the costs of compliance, the energy and nonair quality environmental impacts of compliance, any existing pollution control technology in use at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology;

(3) the term "manmade air pollution" means air pollution which results directly or indirectly from human activities;

(4) the term "as expeditiously as practicable" means as expeditiously as practicable but in no event later than five years after the date of approval of a plan revision under this section (or the date of promulgation of such a plan revision in the case of action by the Administrator under section 7410(c) of this title for purposes of this section);

(5) the term "mandatory class I Federal areas" means Federal areas which may not be designated as other than class I under this part;

(6) the terms "visibility impairment" and "impairment of visibility" shall include reduction in visual range and atmospheric discoloration; and

(7) the term "major stationary source" means the following types of stationary sources with the potential to emit 250 tons or more of any pollutant: fossil-fuel fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (thermal dryers), kraft pulp mills, Portland Cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, 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 facilities, chemical process plants, fossil-fuel boilers of more than 250 million British thermal units per hour heat input, petroleum storage and transfer facilities with a capacity exceeding 300,000 barrels, taconite ore processing facilities, glass fiber processing plants, charcoal production facilities.

(July 14, 1955, ch. 360, title I, § 169A, as added Pub. L. 95–95, title I, § 128, Aug. 7, 1977, 91 Stat. 742.)

EFFECTIVE DATE

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

§ 7492. Visibility

(a) Studies

(1) The Administrator, in conjunction with the National Park Service and other appropriate Federal agencies, shall conduct research to identify and evaluate sources and source regions of both visibility impairment and regions that provide predominantly clean air in class I areas. A total of $8,000,000 per year for 5 years is authorized to be appropriated for the Environmental Protection Agency and the other Federal agencies to conduct this research. The research shall include—

(A) expansion of current visibility related monitoring in class I areas;

(B) assessment of current sources of visibility impairing pollution and clean air corridors;

(C) adaptation of regional air quality models for the assessment of visibility;

(D) studies of atmospheric chemistry and physics of visibility.

(2) Based on the findings available from the research required in subsection (a)(1) of this section as well as other available scientific and technical data, studies, and other available information pertaining to visibility source-receptor relationships, the Administrator shall conduct an assessment and evaluation that identifies, to the extent possible, sources and source regions of visibility impairment including natural sources as well as source regions of clear air

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Part VII

Environmental Protection Agency

Visibility Protection for Federal Class I Areas

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 51

[FRL 1487-2, Docket No. A-79-40]

Visibility Protection for Federal Class I Areas

AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Proposed rulemaking.

SUMMARY: Section 169A of the Clean Air Act requires EPA to promulgate regulations to assure reasonable progress toward the congressionally declared goal of "the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from manmade air pollution." Today's action proposes regulations which would require thirty-six States to develop and implement programs to address the congressionally declared national goal. EPA is also making available today certain guidelines which would provide analytical tools for carrying out the regulations. This proposal would also provide additional procedures for conducting visibility analyses under EPA's prevention of significant deterioration regulations. This notice establishes a 75-day comment period and schedules two legislative-type public hearings for the purpose of receiving comments on both the proposal and the guidelines.

DATES: Written comments must be postmarked no later than August 5, 1980. Public hearings will be held on June 30, 1980 (Washington, D.C.), and July 2, 1980 (Salt Lake City, Utah).

ADDRESS: All written comments should be submitted (in duplicate, if possible) to: Central Docket Section (A-130), Docket No. A-79-40, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460.

Docket No. A-79-40, containing material relevant to this action, is located in the U.S. Environmental Protection Agency, Central Docket Section, Room 2902, 401 M Street, S.W., Washington, D.C. 20460. The docket may be inspected between 8:00 a.m. and 4:00 p.m. on weekdays and a reasonable fee may be charged for copying.

Public hearings are scheduled for the following locations:

(a) Room 3906, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C., 9:00 a.m. (EDT), June 30, 1980.

(b) Little Theater, Salt Palace, 100 S.W. Temple, Salt Lake City, Utah, 9:00 a.m. (MDT), July 2, 1980.

FOR FURTHER INFORMATION CONTACT: Mr. Johnnie L. Pearson, Office of Air Quality Planning and Standards (MD-15), Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Telephone: (919) 541-5497.

I. Supplementary Information

A. Public Hearings

EPA is announcing two legislative-type public hearings on the proposed regulations. These public hearings will be held in Washington, D.C., and Salt Lake City, Utah. The purpose of these public hearings is to receive public comment on the proposed regulations. A verbatim transcript of each hearing will be made and placed in Docket No. A-79-40, Central Docket Section (A-130), U.S. Environmental Protection Agency, Room 2902, 401 M Street, SW., Washington, D.C. 20460.

Any person who wishes to speak at the meeting should, by June 23, 1980, notify the Information Contact listed above of the intent to make an oral presentation, giving name, address, telephone number, and length of presentation. In order to permit as many views as possible, presentations will, in general, be limited to 15 minutes. Additional time will be made available based upon the number of commenters and the demonstrated need for additional time. EPA will develop a schedule for presentations based upon the notices it receives. Persons not providing prior notice but desiring to speak will be accommodated as time permits. Persons with a written statement should submit three copies of the statement to aid in its prompt evaluation. A copy of any written statement received at the hearing will be placed in the docket noted above.

B. Request for Extension of Comment Period

The Agency recognizes the substantial amount of material presented by this proposal and accompanying guidelines but is confident the 75-day comment period and the two public hearings present ample opportunity for the written and oral presentations of data, views, and arguments, especially since this proposal was preceded by an Advance Notice of Proposed Rulemaking (ANPR), published November 30, 1979 (44 FR 69116), which itself established a 30-day written comment period and three public workshops that were held in Seattle, Washington; Salem, Oregon; and Denver, Colorado, the week of January 20, 1980. Thus, EPA intends to deny any request for extension of the comment period without a showing of extraordinary circumstances. EPA notes, additionally, that any extension of the comment period would seriously jeopardize its ability to promulgate final regulations by November 15, 1980 as it must under an order entered November 5, 1979 in the United States District Court for the District of Columbia in *Friends of the Earth, Inc. v. Costle*, No. 80-3081. This litigation resulted from EPA's inability to promugate regulations by August 7, 1979 as required by Section 169(a)(4) of the Clean Air Act (Act) 42 USC 7491(a)(4).

II. Background

A. The Statute

Section 169A of the Clean Air Act requires visibility protection for mandatory class I Federal areas where it has been determined that visibility is an important value. "Mandatory class I Federal areas" are all international parks and certain national parks and wilderness areas as described in Section 162(a) of the Act. To work toward meeting the national visibility goal set out in Section 169A(a)(1) of the prevention of any future and remedying of any existing man-made visibility impairment in such areas, Section 169A requires that the:

- Department of Interior review all mandatory class I Federal areas and identify those where visibility is an important value [Section 169(a)(2)].
- EPA, after consulting with the Department of Interior, promulgate a list of the mandatory class I Federal areas in which visibility is an important value [Section 169A(a)(2)].
- EPA prepare a report to Congress on methods for achieving progress toward the visibility goal. The report must include methods to determine visibility impairment, modeling techniques, methods for preventing and remedying man-made air pollution and resulting visibility impairment, and a discussion of visibility related pollutants and sources [Section 169A(a)(3)].
- EPA promulgate regulations which will (1) provide guidelines to States for including visibility protection in State Implementation Plans (SIPs); (2) require SIPs to include emission limits, schedules for compliance, and other measures as may be necessary to make reasonable progress toward meeting the national visibility goal; and (3) provide guidelines for determining best available retrofit technology emission limitations for fossil-fuel fired power plants in excess of 750 megawatts generating capacity [Section 169A(a)(4) and (b)].

• EPA approve or disapprove SIP revisions submitted in response to the promulgated requirements [Section 110(a)(2)] and promulgate regulations for those States which submit inadequate regulations or fail to submit regulations in response to EPA's requirements [Section 110(c)].

• In addition, Congress also included visibility protection requirements as the preconstruction requirements for prevention of significant deterioration (PSD) in Section 165 of the Act:

• Federal Land Managers have "an affirmative responsibility" to protect the visibility values of a class I area and may recommend the denial of a PSD permit if an adverse impact on visibility would result, even if the class I PSD increments would be met [Section 165(d)].

• PSD applicants must analyze the visibility at the site of the proposed construction and any area potentially affected by the proposed construction [Section 165(e)].

B. Rulemaking

On November 30, 1979, the Agency initiated informal regulatory development by publishing an Advance Notice of Proposed Rulemaking (ANPR) (44 FR 69256). The purpose of this ANPR was to inform the public of this effort and to solicit comments on various major issues which needed resolution during regulatory development. A summary and a copy of all comments received is included in Docket A-79-40. EPA's response to many of these comments is included in the various sections of this preamble. Also on November 30, 1979, EPA published its final determination under Section 169A(e)(2) of mandatory class I Federal areas where visibility is an important value (44 FR 69122).

C. Document Availability

The Agency relied on the documents listed below, which served as background to these proposed regulations. The Agency is soliciting comments, especially on the DRAFT documents. The documents listed as final have previously received substantial public review. Both draft and final documents are in Docket No. A-79-40 and are also available from the sources indicated below.

(1) "Protecting Visibility: An EPA Report to Congress" (EPA-450/5-79-008) (final), will be available shortly from: National Technical Information Service, 5285 Port Royal Rd., Springfield, Virginia 22161.

(2) "The Development of Mathematical models for the Prediction of Anthropogenic Visibility Impairment" (EPA-450/5-79-110 a, b, c), (final), National Technical Information Service, 5285 Port Royal Rd., Springfield, Virginia 22161 (PB 293119, PB 293120, PB 293121).

(3) "Criteria for the Identification of Integral Vistas (draft)," Control Programs Development Division (MD-15), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711. The Agency is proposing to incorporate this guideline by reference in the **Federal Register** and expects to ask the Director of the **Federal Register** for approval before promulgation.

(4) "Proposed Guidelines for Determining Best Available Retrofit Technology for Coal-Fired Power Plants and Other Major Stationary Sources (Draft)," Control Programs Development Division (MD-15), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711.

The Agency is proposing to incorporate this guideline by reference in the **Federal Register** and expects to ask the Director of the **Federal Register** for approval before promulgation.

(5) "Preliminary Assessment of Economic Impacts of Visibility Regulations (Draft)," Control Programs Development Division (MD-15), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711.

III. PROGRAM OVERVIEW

This preamble provides a brief description of the regulatory program, serving to introduce the specific regulatory language. Following the regulatory language is a Supplemental Statement of Basis and Purpose which discusses the reasons why we have taken certain positions in this proposal.

THE PROBLEM

Congress has set aside certain international parks and national wilderness areas, national memorial parks, and national parks (mandatory class I Federal areas) to preserve and enhance their beauty for present and future generations to enjoy. The intrinsic beauty of these areas, however, has been threatened due to visibility degrading pollution. Congress became aware of the need to protect visibility in these areas and directed EPA to explore the relationship between man-caused pollution and visibility.

From this research we can say there are generally two types of air pollution which reduce or impair visibility:

(1) smoke, dust, or colored gas plumes that are emitted from stacks and obscure the sky or horizon relatable to a single source or a small group of sources, and (2) widespread, regionally homogeneous haze from a multitude of sources which impairs visibility in every direction over a large area.

These types of pollution are caused by factories, plants, and other sources that emit particles and gases into the air. These substances either absorb or scatter the light, thus reducing the amount of light a person can receive from a viewed object. The practical effect is that impaired visibility degrades the aesthetic value of surrounding landscape by either discoloring the atmosphere to produce a visible plume or whitening the horizon and causing objects to appear flattened so that landscape colors and textures become less discernible or, in the case of a discernible plume, obscuring some portion of the landscape.

The Program

A Phased Approach to the Problem

Congress, in recognition of the need to protect such aesthetics declared as a national visibility goal the remedying of existing pollution and the prevention of any future pollution that interferes with visibility in mandatory class I Federal areas. We reviewed the techniques for identifying, measuring, predicting, and controlling visibility impairment, and in November, 1979, published "Protecting Visibility: An EPA Report to Congress" which discusses in detail the present scientific knowledge of visibility, including monitoring, modeling, and control of visibility impairment.

As described in that report, we determined that the present mathematical models and monitoring techniques, while showing promise, should be evaluated further before they are routinely required in a regulatory program which applies to existing sources that impair visibility. However, in some instances we can identify the origin of visibility impairment caused by a single source or small group of sources without the use of sophisticated analytical techniques. Simple monitoring techniques such as visual observation (either ground based or with aircraft) can often identify which source contributes to the impairment.

Modeling and monitoring techniques which address impairment caused by single sources will soon be available. Similar techniques which deal with multiple-source problems (regional haze and urban plumes) need additional research and will not be available for some time.

Recognizing the need to initiate protection as soon as possible while also realizing that certain scientific and technical limitations do exist, we are proposing a phased approach to

visibility protection. Phase I of this program would:

1. Require control of impairment that can be traced to a single major source or small group of sources.

2. Evaluate and control new sources to prevent future impairment, and

3. Require States to adopt other strategies to remedy existing and prevent future visibility impairment.

Future phases will further implement the visibility program by addressing more complex problems such as regional haze and urban plumes. We will propose and promulgate future phases when improvement in monitoring techniques provides more data on source specific levels of visibility, regional scale models become refined, and our general scientific knowledge of visibility improves.

Even though we are calling these proposed regulations "Phase I of the visibility protection program," the basic structure of the regulations provided today will remain constant for all phases. These regulations function as the basic framework from which this present program can be implemented and into which future phases can be incorporated. In other words, the basic plan requirements will remain consistent while only the elements which define the scope of the program will change in response to advances in our technical knowledge.

The proposed regulations require input into the program by all affected parties. Thus, coordination between the States, the Federal Land Managers, and EPA will be necessary to implement an effective visibility program. The State retains the primary responsibility of developing a viable visibility program. The Federal Land Manager has the responsibility of protecting the visibility values of Federal class I areas. These two must work together to ensure the visibility values of these areas are protected. EPA's responsibility is to (1) promulgate visibility regulations which would require States to revise their State Implementation Plans (SIPs), and (2) continue research into visibility for use in future phases.

The Program—In Detail

We are proposing regulations that require the 36 States containing mandatory class I Federal areas to submit revisions to their SIPs within 9 months. These revisions will (1) require certain existing major stationary sources to install the Best Available Retrofit Technology (BART) for controlling those pollutants which cause visibility impairment, (2) identify and evaluate long-term strategies for making reasonable progress toward remedying existing and preventing future impairment in the mandatory class I Federal Areas, and (3) require the adoption of certain measures that will supplement the States' new source review program regarding visibility impacts. These requirements are summarized below.

A. BART Requirements

1. *The Federal Land Managers and the States will begin early consultation with each other.* We expect these two groups to work closely with each other throughout the process of developing all aspects of the SIP revision. Because the Clean Air Act charges the Federal Land Managers with protecting air quality related values, including visibility, the State must adequately consider comments from the Federal Land Managers.

2. *The Federal Land Manager or the State identifies whether, within any mandatory class I Federal area, there exists any impairment of visibility.* This impairment must be identified within 90 days of promulgation of these regulations. We are defining "impairment" as any "humanly perceptible change in visibility (visual range, contrast, coloration) from that which would have existed under natural conditions."

3. *Federal Land Managers or the State will identify the integral vistas (if any) for each mandatory class I Federal area.* These regulations would permit the Federal Land Managers to identify integral vistas. An integral vista is a view from within the area of a scenic landmark that is located outside the boundary of the area.

4. *The State, in consultation with the Federal Land Managers, will identify the existing major stationary sources which cause the visibility impairment.* The regulation provides a specific definition for existing major stationary sources. During Phase I of the visibility program, the State and the Federal Land Manager must be able to "reasonably attribute" the visibility impairment in the mandatory class I Federal area to a major stationary source through visual observation or other monitoring technique. During later phases of the program, the Agency will likely require the State and Federal Land Managers to place more emphasis on the use of modeling in identifying pollution sources.

5. *The State, in consultation with the Federal Land Manager, will perform a BART analysis on existing major stationary sources identified as impairing visibility.* The BART analysis does not apply to any source which was in operation before August 7, 1962. In the BART analysis, the State determines what additional air pollution control technologies need to be required in order to reduce existing visibility impairment.

In conducting this analysis, the State first identifies those control techniques that could improve visibility. If techniques exist then the State proceeds with the BART analysis, but if no technique exists, then the State stops the analysis at this point. For example, while methods might exist for the partial control of a pollutant the reductions achievable may not be sufficient to achieve any improvement in visibility.

In such a case the State would not be obligated to require controls. If control techniques do exist that would improve visibility, the State begins studying alternative control strategies. The State should consider, on a case-by-case basis, how much various alternative control techniques would cost, the energy and environmental impact of the controls, what air pollution technologies the source already has in place, the remaining useful life of the source, and to what degree the control alternatives would improve visibility. In order to assist States in the analysis of BART, the Agency has developed a guideline. For large power plants, BART must be determined pursuant to this guideline. The BART guideline proposed today is necessarily general. The Agency is considering supplementing this guideline in the near future, particularly with regard to specific large fossil-fuel fired power plants or categories of such power plants.

The last stage of the BART analysis is for the State to specify an emission limitation that reflects BART. The source must then install, operate, and maintain the control technology to meet the emission limitation.

6. *The source may apply to the Administrator for an exemption from BART on the basis that the source does not cause or contribute to significant impairment of visibility.* The source must notify the Federal Land Manager of its application and must receive written concurrence from the State on the application. To receive an exemption, the source must demonstrate to the Administrator that it does not cause or contribute to significant impairment of visibility.

By significant impairment we mean the level of impairment that interferes with the intended use of the area. When applying for an exemption, a source should address the frequency, extent, time of occurrence, intensity and duration of the impairment. If the Administrator grants an exemption, the Federal Land Manager must concur

before the exemption will become effective.

B. Monitoring of Visibility Impacts.

1. *The State will develop a monitoring strategy.* This strategy would assess the State's need for visibility monitoring taking into consideration available and forthcoming monitoring techniques and guidelines.

2. *The State will provide for consideration of monitoring requirements for new sources.* The State should assess the need for monitoring by a source to provide information on any potential impacts on visibility in the Federal Class I area as part of the new source review process.

3. *The State will evaluate any available monitoring data.* Any existing monitoring data available to the State should be incorporated into the State's decision-making process for BART determinations and new source review decisions.

C. Development of the Long-Term Strategy.

The proposal would require each plan to include a long-term (10–15 year) strategy for making reasonable progress toward remedying existing and preventing future visibility impairment. The requirements are summarized below.

Remedying Existing Impairment

1. *The State must consider any land management plans to protect or enhance visibility in the mandatory class I Federal areas.* This will also be useful in developing the part of the long-term strategy relating to prevention of future impairment.

2. *Some of the measures the State must consider are:*

a. *The effectiveness of existing air pollution control programs in reducing visibility impairment.* For example, the attainment/maintenance of National Ambient Air Quality Standards may have a positive effect on reducing or eliminating visibility impairment in mandatory class I Federal areas. If this is the case, the State should explain how this would contribute to reasonable progress.

b. *Additional emission limitations and schedules for compliance for uncontrolled or poorly controlled sources not covered by BART.* This recognizes that States may have to control sources not covered by BART to make reasonable progress toward the national goal.

c. *Retirement of existing sources and replacement with new, well controlled facilities.* Where possible this should be encouraged because this measure may have a positive effect on visibility.

3. *The State must do a reanalysis for each existing major stationary source which contributes to visibility impairment in a mandatory class I Federal area.* This reanalysis would occur when the Administrator determines new technology is available which would more effectively control a pollutant which causes visibility impairment. All pollutants would be analyzed for their contribution to the visibility impairment regardless of previous BART requirements. Where control representing BART has not been previously required for a pollutant reanalyzed, the State shall require the imposition of such control as indicated by this reanalysis.

Preventing Future Impairment

The States must review all major emitting facilities and major modifications as defined in EPA's Prevention of Significant (PSD) regulations for their anticipated impacts on visibility in mandatory class I Federal areas.

The prevention of future visibility impairment was a major concern of Congress. It is addressed not only in Section 169A, which deals exclusively with visibility, but also in Sections 160–169 on PSD. We have already promulgated regulations meeting the visibility requirements of the PSD Sections. In these PSD regulations, the owner or operator of new major emitting facilities or major modifications of a major emitting facility must assess whether they would impair visibility. Thus, a State's compliance with the PSD program would go a long way toward preventing future visibility impairment in mandatory class I Federal areas.

There is, however, a gap in the PSD regulations in that they do not call for the review of a major emitting facility or major modification locating in a "non-attainment" area, even if it would impair visibility in a mandatory class I Federal area. Today's proposal would remedy this with regard to visibility impacts by covering all such sources irrespective of their location.

D. *Review of the Long-term Strategy.*

The State will review its strategy in consultation with the Federal Land Manager and report its findings to the public and the Administrator at least every three years. We believe that the periodic review of the long-term strategy is an important part of assessing reasonable progress toward the national visibility goal. Because the visibility program is new and evolving, it is necessary to 1) take into account advances in technology, 2) evaluate progress toward the goal, 3) evaluate specific program effectiveness and 4) provide a reassessment of the reasonableness of measures incorporated into the long-term strategy. In this review of the long-term strategy the regulations would require certain analyses, including: an assessment of the progress achieved in remedying existing impairment, an evaluation of the change in visibility, an assessment of the strategy's long-term ability to prevent future impairment, and identification of additional measures that may be necessary to make reasonable progress toward the national goal.

E. New Source Review Requirements for Visibility Impacts.

EPA's PSD regulations require that a proposed major emitting facility or major modification evaluate its potential impact on visibility and, if the source would cause an adverse impact on visibility in a Federal class I area that the State deny the permit.

Commenters on the Advance Notice of Proposed Rulemaking noted that the States need additional guidance for new source review. We are therefore proposing a definition of "adverse impact" and clarifying certain procedural relationships between the Federal Land Manager and the State in the review of new source impacts on visibility in Federal class I areas. Section 51.307 of the visibility regulations specifies requirements the States must meet during the new source review process.

As the first step in the review process the State notifies the Federal Land Manager of any potential new source that may impact visibility in a Federal class I area. The State and Federal Land Managers then begin consulting with each other, which consultation will continue throughout the permitting process. Where the PSD class I increments are not violated, the Federal Land Manager may demonstrate that the source will have an adverse impact on visibility in the Federal class I area. The manager provides this demonstration to the State which then either grants or denies the permit application. If the State agrees with the Federal Land Manager's assessment that the source will adversely impact visibility, then the State will deny the permit. If the State disagrees with the Federal Land Manager's demonstration then it will provide the Federal Land Manager with a written explanation of its findings. The State may also require the source to monitor visibility at the proposed site as part of the PSD permit application.

F. Conclusion

The immediate, principal benefit of these regulations will be (1) the reduction or elimination of impacts *reasonably attributable* to specific existing sources, and (2) clarification of procedures for the review of new sources. The focus of these regulations will be principally in the West since western areas have generally good visibility now and are extremely sensitive to degradation of their visibility. Also, the majority of the mandatory class I Federal areas are located in the western United States.

The phased approach of these regulations will limit the amount of resources the States will have to expend on revising their SIPs. Preliminary indications are that a limited number of existing major stationary sources in a few States will have to retrofit controls. The one major requirement applicable to all 36 States would be the development of a long-term strategy, which includes a review of all new sources impacting visibility, for making reasonable progress toward the national visibility goal. EPA believes, however, that some of the basic elements of an acceptable strategy already exist within the framework of other air pollution programs. Therefore, the State will need to examine the feasibility and efficacy of only a few other measures to determine if they should or need to be included in the long-term strategy.

It should be noted, however, that although these regulations require a new source review program, *all* States must review new sources in accordance with PSD regulations. The visibility regulations *neither subsume nor eliminate* the State responsibility under the PSD program.

The other requirements of these proposed regulations are primarily procedural in nature and while they must be addressed, we believe that the regulations provide sufficient guidance to preclude the expenditure of vast State resources for compliance.

IV. REGULATORY IMPACT

The Agency has prepared a draft regulatory impact analysis for review in concert with these proposed rules. This document is included in Docket No. A-79-40 and may be obtained by writing Control Programs Development Division (MD-15), U.S. Environmental Protection Agency, Research Triangle Park, N.C. 27711.

V. SOLICITATION OF COMMENTS

The Agency actively solicits comments on all aspects of the proposed regulations and guidelines.

These proposed rules are issued under the authority granted in Sections 110, 114, 160–169, 169A, and 301 of the Clean Air Act, 42 U.S.C. 7410, 7414, 7470–7479, 7491, and 7601.

Dated: May 15, 1980.

Douglas Costle,

Administrator.

It is proposed to add a new Subpart P to Part 51, Title 40 of the Code of Federal Regulations to read as follows:

Subpart P—Protection of Visibility

Sec.

51.300 Purpose and applicability.
51.301 Definitions.
51.302 Implementation control strategies.
51.303 Exemptions from control.
51.304 Identification of integral vistas.
51.305 Monitoring.
51.306 Long-term strategy.
51.307 New Source review.

Authority: 42 U.S.C. 7410, 7414, 7470–7479, 7491, 7601.

Subpart P—Protection of Visibility

§ 51.300 Purpose and applicability

(a) *Purpose.* The primary purpose of this Subpart is (1) to require States to develop programs to assure reasonable progress toward meeting the national goal of preventing any future, and remedying any existing, impairment of visibility in mandatory class I Federal areas which impairment results from man-made air pollution, and (2) to establish procedures for new source permit applicants, States, and Federal Land Managers to use in conducting the visibility impact analysis required at 40 CFR 51.24(p) for new sources.

(b) *Applicability.* (1) The provisions of this Subpart are applicable to: (i) each State and has a mandatory class I Federal area identified in 40 CFR Part 81, Subpart D, and (ii) each State in which there is any source the emissions from which may reasonably be anticipate to cause or contribute to any impairment of visibility in any such area. (iii) Section 51.307 is applicable to all States for the purpose of new source review under the Clean Air Act of visibility impacts in Federal class I areas.

(2) The provisions of this Subpart, except as provided for in subparagraph (iii) above, are applicable to the following States unless the Administrator later determines that the provisions of subparagraph (1) above are not met. Applicability of the provisions of this Subpart to other States shall become effective only upon the determination of the Administrator that either of the provisions in subparagraph (1) above apply.

(i) Alabama
(ii) Alaska
(iii) Arizona
(iv) Arkansas
(v) California
(vi) Colorado
(vii) Florida
(viii) Georgia
(ix) Hawaii
(x) Idaho
(xi) Kentucky
(xii) Louisiana
(xiii) Maine
(xiv) Michigan
(xv) Minnesota
(xvi) Missouri
(xvii) Montana
(xviii) Nevada
(xix) New Hampshire
(xx) New Jersey
(xxi) New Mexico
(xxii) North Carolina
(xxiii) North Dakota
(xxiv) Oklahoma
(xxv) Oregon
(xxvi) South Carolina
(xxvii) South Dakota
(xxviii) Tennessee
(xxix) Texas
(xxx) Utah
(xxxi) Vermont
(xxxii) Virginia
(xxxiii) Virgin Islands
(xxxiv) Washington
(xxxv) West Virginia
(xxxvi) Wyoming

§ 51.301 Definitions.

As used in this Subpart, all terms shall have the meaning provided for in the Clean Air Act except as defined herein.

(a) "Existing Major Stationary Source" means any of the following stationary sources of air pollutants which was not in operation prior to August 7, 1962, or reconstructed after that date, and was in existence on August 7, 1977 and has the potential to emit 250 tons per year or more of any pollutant regulated under the Clean Air Act:

(1) fossil-fuel fired steam electric plants of more than 250 million British thermal units per hour heat input,

(2) coal cleaning plants (thermal dryers),

(3) kraft pulp mills,

(4) Portland cement plants,

(5) primary zinc smelters,

(6) iron and steel mill plants,

(7) primary aluminum ore reduction plants,

(8) primary copper smelters,

(9) municipal incinerators capable of charging more than 250 tons of refuse per day,

(10) hydrofluoric, sulfuric, and nitric acid plants,

(11) petroleum refineries,

(12) lime plants,

(13) phosphate rock processing plants,

(14) coke oven batteries,
(15) sulfur recovery plants,
(16) carbon black plants (furnace process),
(17) primary lead smelters,
(18) fuel conversion plants,
(19) sintering plants,
(20) secondary metal production facilities,
(21) chemical process plants,
(22) fossil fuel boilers of more than 250 million British thermal units per hour heat input,
(23) petroleum storage and transfer facilities with a capacity exceeding 300,000 barrels,
(24) taconite ore processing facilities,
(25) glass fiber processing plants, and
(26) charcoal production facilities.

(b) "Potential to emit" means the capability at maximum design capacity to emit a pollutant after the application of air pollution control equipment. Annual potential shall be based on the maximum annual rated capacity of the stationary source assuming continuous year round operation. Enforceable permit conditions on the type of materials combusted or processed may be used in determining the annual potential. Fugitive emissions count, to the extent quantifiable, for each existing major stationary source in determining the annual potential. Secondary emissions are specifically excluded from the determination of annual potential.

(c) "Fugitive Emissions" means those emissions which do not pass through a stack, chimney, vent, or other functionally equivalent opening.

(d) "Secondary emissions" means emissions which occur or would occur as a result of the construction or operation of an existing major stationary source but do not come from the existing major stationary source.

(e) "Stationary Source" means any building, structure, facility, or installation which emits or may emit any air pollutant regulated under the Clean Air Act.

(f) "Building, structure, facility, or installation" means any grouping of pollutant emitting activities which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person (or persons under common control).

(g) "Best Available Retrofit Technology (BART)" means an emission limitation (including a visible emission standard) based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by an existing major stationary source. The emission limitation shall be established, on a case-by-case basis, taking into consideration the technology available, the costs of compliance, the energy and nonair quality environmental impacts of compliance, any existing pollution control equipment in use at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

(h) "Reconstruction" will be presumed to have taken place where the fixed capital cost of the new component(s) exceeds 50 percent of the fixed capital cost of a comparable entirely new source. However, any final decision as to whether reconstruction has occurred shall be made in accordance with the provisions of 40 CFR 60.15(f)(1-3). A reconstructed source will be treated as a new major stationary source for purposes of this Subpart, except that use of an alternative fuel or raw material 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) or by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act, shall not be considered reconstruction.

(i) "Fixed capital cost" means the capital needed to provide all of the depreciable components.

(j) "Visibility impairment" means any humanly perceptible change in visibility (visual range, contrast, coloration) from that which would have existed under natural conditions.

(k) "Natural Conditions" means the visibility which would be expected to occur in the absence of man-made air pollution.

(l) "Significant impairment" means for purposes of Section 51.303 visibility impairment which, in the judgment of the Administrator, interferes with the management, protection, preservation, or enjoyment of the mandatory class I Federal area, including interference with and impairment of the visitor's visual experience. This determination shall be made on a case-by-case basis taking into account the extent, intensity, and duration of the impairment, frequency and time of occurrence of the impairment, the correlation between times of visitors use and access to the mandatory class I Federal area and the frequency of occurrence and timing of natural conditions.

(m) "Integral vista" means the perception from within the Federal class I area of a specific historical, cultural, or scenic landmark or panorama which is located outside the boundary of a Federal class I area, which vista is important to the visitor experience of the area or the fundamental purpose for which the area was established and preserved.

(n) "In operation" means engaged in activity related to the primary design function of the source.

(o) "Reasonably attributable" means attributable by means of visual observation or other monitoring technique.

(p) "In existence" means that the owner or operator has obtained all necessary preconstruction approvals or permits required by Federal, State, or local air pollution emissions and air quality laws or regulations and either has (a) begun, or caused to begin, a continuous program of physical on-site construction of the facility or (b) 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 construction of the facility to be completed in a reasonable time.

(q) "Major emitting facility" and "major modification" means "major stationary source" and "major modification" as defined in 40 CFR 51.24.

(r) "Adverse impact" means for purposes of § 51.307 visibility impairment which interferes with the management, protection, preservation, or enjoyment of the Federal class I area, including interference with and impairment of the visitor's visual experience. This determination shall be made on a case-by-case basis taking into account the extent, intensity and duration of visibility impairment, the frequency and time of occurrence of the impairment, the correlation between time of visitors use and access to the Federal class I area, and the frequency of occurrence and timing of natural conditions.

(s) "Federal Land Manager" means the secretary of the department with authority over any Federal class I area, the Chairman of the Roosevelt-Campobello International Park Commission, or their designated agents.

(t) "Agency" means the U.S. Environmental Protection Agency.

§ 51.302 Implementation control strategies.

(a) *Plan Revision Procedures.* (1) Each State identified in § 51.300(b)(2) shall submit, no later than nine months from the date of promulgation of this regulation, an implementation plan revision for the purposes of meeting the requirements of this Subpart.

(2)(i) The State, prior to adoption of any implementation plan required by this Subpart, shall conduct one or more public hearings on such plan.

(iii) Any hearing required by this Subpart shall be held only after reasonable notice, which shall include at least thirty days prior to the date of such hearing(s):

(A) Notice given to the public by prominent advertisement in the region affected announcing the date(s), time(s), and place(s) of such hearing(s);

(B) Availability of each proposed plan and all supporting documentation in at least one location in each region to which it will apply, and the availability of each compliance schedule for public inspection in at least one location in the region in which the affected source is located;

(C) Written notification to the Administrator (through the appropriate Regional Office);

(D) Written notification to each local air pollution control agency in each region to which the plan will apply;

(E) Written notification of each affected Federal Land Manager;

(F) In the case of interstate impacts, written notification to any other States which may be affected as a result of such plan; and

(G) A summary prepared by the Federal Land Manager of the conclusions and recommendations, if any, on the proposed plan.

(3) Submission of plans as required by this Subpart shall be conducted in accordance with the procedures in 40 CFR 51.5.

(4) The State shall include, as part of the information available to the public prior to public hearing(s) on such proposed plan, evidence of consultation with all affected Federal Land Managers and their conclusions and recommendations, if any, on the proposed plan.

(5) The Administrator, prior to proposed approval or disapproval of a plan submitted under this Subpart, shall consult with all appropriate Federal Land Managers.

(b) *State and Federal Land Manager Coordination.* (1) The State shall identify, to the Director of the National Park Service, the Director of the Fish and Wildlife Service, the Chief of the Forest Service and/or the Chairman of the Roosevelt-Campobello International Park Commission, as appropriate, in writing and within 30 days of the date of promulgation of these regulations, the title of the official to which the Federal Land Manager of any area listed in 40 CFR Part 81, Subpart D shall:

(i) Submit the list of integral vistas that are to be afforded visibility protection for the purpose of implementing Section 51.304, and

(ii) Identify visibility impairment for the purpose of implementing subparagraph (4)(c) below.

(2) The State, at least 60 days prior to holding public hearings on the plan, shall consult in person with the affected Federal Land Manager on all aspects of the proposed plan revision for the purpose of meeting the requirements of this Subpart.

(3) The plan shall provide procedures for continuing consultation between the State and Federal Land Manager on the implementation of the visibility protection program required by this Subpart.

(c) *General Plan Requirements.* (1) The plan shall contain:

(i) A long-term (10–15 years) strategy, including such emission limitations, schedule of compliance, and other such measures, as may be necessary to make reasonable progress toward the national goal specified in § 51.300(a) in the manner specified in § 51.306.

(ii) An assessment prepared after consultation with the Federal Land Manager and including such comments as provided by the Federal Land Manager, of the impairment of visibility in each mandatory class I Federal area and a discussion of how each element of the plan addresses the impairment.

(iii) Any integral vista identified under § 51.304(b) shall be protected under the requirements of this Subpart to the same extent as any mandatory class I Federal area identified in 40 CFR Part 81, Subpart D. The plan shall identify all mandatory class I Federal areas, including all integral vistas to be protected.

(iv) The plan shall provide for the protection of additional integral vistas identified in accordance with § 51.304(c) at the earliest opportunity, but in no case less frequent than the time of the periodic review of the long term strategy required by § 51.306(c).

(v) The plan shall provide for the protection of integral vistas identified in accordance with § 51.304 (b) or (c) or (d) for purposes of review of new major emitting facilities and major modifications as provided for in § 51.306(d).

(vi) The State need not provide visibility protection of a vista identified as integral by the Federal Land Manager, if it demonstrates to the satisfaction of the Administrator, that such an integral vista has not been identified in accordance with "Criteria for the Identification of Integral Vistas."

(2) The plan shall require each source to maintain control equipment required by this Subpart and establish procedures to ensure such control equipment is properly operated and maintained.

(4) *Determination of BART.* (i) The plan shall include emission limitations representing BART for each existing major stationary source identified according to the procedures in subparagraph (ii) below.

(ii) The State, in consultation with the appropriate Federal Land Manager, shall analyze for BART each existing major stationary source which may reasonably be anticipated to cause or contribute to visibility impairment in any area identified in 40 CFR Part 81, Subpart D, which impairment is identified by the State, or by the appropriate Federal Land Manager within 90 days of promulgation of these regulations. The Federal Land Manager may recommend to the State for BART analysis existing major stationary sources suspected of causing or contributing to visibility impairment in the mandatory class I Federal area. The State, in determining whether the identified impairment is reasonably attributable to an existing major stationary source, shall consult with and take into account the recommendations of the affected Federal Land Manager and the appropriate EPA Regional Administrator, or his designated representative, and shall provide, in writing and at least 30 days prior to any public hearing on the plan, all supporting documentation on any existing major stationary source not analyzed for BART as recommended by the affected Federal Land Manager or appropriate EPA Regional Administrator.

(iii) If the State determines that technological or economic limitations on the applicability of measurement methodology to a particular existing major stationary source would make the imposition of an emission standard infeasible it may, in consultation with the Federal Land Manager, instead prescribe a design, equipment, work practice, or other operational standard, or combination thereof, to require the application of BART. Such standard, to the degree possible, is to set forth the emission reduction to be achieved by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

(iv) Emission limitations set under this paragraph for fossil-fuel fired generating plants having a total generating capacity in excess of 750 megawatts shall be determined due to "Proposed Guidelines for Determining Best Available Retrofit Technology for Coal-fired Power Plants and Other Major Stationary Sources."

(c) The plan shall require that each existing major stationary source required to install and operate BART do so as expeditiously as practicable but in no case later than five years after plan approval.

(d) The plan shall require that each existing major stationary source required to install and operate BART install continuous emission monitoring, as applicable, in accordance with 40 CFR Part 51, Appendix P.

§ 51.303 Exemptions from control.

(a)(1) Any existing major stationary source required by action under § 51.302 to install, operate, and maintain BART may apply to the Administrator for an exemption from that requirement.

(2) An application under this Section shall include all available documentation relevant to the impact of the source's emissions on visibility for any area listed in 40 CFR Part 81, Subpart D, and a demonstration by the existing major stationary source that it does not or will not by itself or in combination with other sources emit any air pollutant which may be reasonably anticipated to cause or contribute to any significant impairment of visibility in any mandatory class I Federal area identified in 40 CFR Part 81, Subpart D.

(b) Fossil-fuel fired power plants with a total generating capacity of 750 megawatts or more may receive an exemption from BART only after demonstration to the satisfaction of the Administrator that such source is located at such a distance from all areas listed in 40 CFR Part 81, Subpart D that such power plant does not or will not, by itself or in combination with other sources, emit any air pollutant which may reasonably be anticipated to cause or contribute to significant impairment of visibility in any such area.

(c) Application under this Section must be accompanied by written concurrences from all affected States.

(d) The existing major stationary source shall provide for prior written notice to all affected Federal Land Managers of any application for exemption under this Section.

(e) The Federal Land Manager may provide an initial recommendation on the disposition of such application. Such recommendation, where provided, shall be part of the exemption application. This recommendation shall not be construed as the concurrence required under subparagraph (b) below.

(f) The Administrator, within 90 days of receipt of an application for exemption from control, shall provide notice and opportunity for public hearing on the application.

(g) After notice and opportunity for public hearing, the Administrator may grant or deny the exemption. For purposes of judicial review, final EPA action on an application for an exemption under this Section shall not occur until EPA approves or disapproves the State implementation Plan revision.

(h) An exemption granted by the Administrator under this Section shall be effective only upon concurrence by the appropriate Federal Land Manager with the Administrator's determination.

§ 51.304 Identification of integral vistas.

(a) The Federal Land Manager may, in accordance with "Criteria for the Identification of Integral Vistas", identify to the State integral vistas to be afforded visibility protection.

(b) Integral vistas identified within 90 days from the date of promulgation of these regulations shall be subject to § 51.302(c)(2)(ii).

(c) Integral vistas identified more than 90 days from the date of promulgation of the regulations shall be subject to § 51.302(c)(2)(iii).

(d) Integral vistas identified prior to the calendar year in which a complete new source permit application is filed shall be subject to § 51.302(c)(2)(iii).

(e) The State may identify such additional integral vistas, within its boundaries, as it deems necessary and appropriate.

(f) The provision for identification of integral vistas for mandatory class I Federal areas under paragraphs (c) and (d) above shall not be effective after December 31, 1985.

§ 51.305 Monitoring

(a) The State, in consultation with the Federal Land Manager, shall include in the plan a strategy for evaluating visibility in the mandatory class I Federal areas by visual observation or other monitoring techniques. Such strategy shall take into account current and anticipated visibility monitoring research and the availability of appropriate techniques for monitoring visibility and such guidance as is provided by the Agency.

(b) The plan shall provide for the consideration of available visibility data and shall provide a mechanism for its use in BART analyses, new source permit decisions, and other actions under the plan.

§ 51.306 Long-term strategy.

(a)(1) Each plan shall include a long-term (10-15 years) strategy for making reasonable progress toward the national goal specified in Section 51.300(a).

(2) A long-term strategy shall be identified for each area listed in 40 CFR Part 81, Subpart D.

(3) The plan shall set forth with reasonable specificity why the long-term strategy is adequate for making reasonable progress toward the national goal.

(b) The State, in developing a long-term strategy shall consider any plans and goals provided by the Federal Land Manager for the protection and enhancement of visibility in the mandatory class I Federal area.

(c)(1) The plan shall provide for periodic review and revision, as appropriate, of the long-term strategy not less than every three years. This review shall include consultation with the appropriate Federal Land Manager and a report to the public and the Administrator on progress toward the national goal.

(2) This report shall include:

(i) An assessment, prepared after consultation with the Federal Land Manager and including any evaluations as provided by the Federal Land Manager under § 51.302(c)(4)(iii) of the progress achieved in remedying existing impairment;

(ii) An evaluation, prepared after consultation with the Federal Land Manager and including any evaluations provided by the Federal Land Manager, of any change in visibility since the last such report, or, in the case of the first report, since plan approval;

(iii) A reassessment of the ability of the long-term strategy to prevent future impairment of the mandatory class I Federal area;

(iv) An identification of additional measures, including the need for SIP revisions, that may be necessary to assure reasonable progress toward the national goal;

(v) An assessment of the progress achieved in implementing BART and meeting other schedules set forth in the long-term strategy; and

(vi) An assessment of the impact of an exemption granted under Section 51.303.

(d)(1) The long-term strategy shall provide for review of the impacts on visibility for any area listed in 40 CFR Part 81, Subpart D of all new major emitting facilities and major modifications.

(2) This review of new major emitting facilities and major modifications shall be in accordance with such guidance as is provided by the Agency.

(e) The long-term strategy shall include a review of the impacts on visibility of all pollutants regulated under the Clean Air Act at such times, as determined by the Administrator, as new technology becomes reasonably

available for the control of the pollutant for each existing major stationary source causing or contributing to impairment in any mandatory class I Federal area which impact is reasonably attributable to that source. Where control representing BART has not been previously required for a pollutant reanalyzed at the source, the plan shall require the imposition of such control as indicated by this reanalysis.

(f) The State in developing the long-term strategy shall consider, at a minimum, the following measures for incorporation into the long-term strategy:

(1) Emission reductions due to ongoing air pollution control programs.

(2) Additional emission limitations and schedules for compliance.

(3) Mitigation of impacts of construction activities.

(4) Source retirement and replacement schedules.

(5) Smoke management techniques for agricultural and forestry management purposes, and

(6) Enforceability of emission limitations and control measures.

(g) The plan shall discuss the reasons why the above and other reasonable measures considered in the development of the long-term strategy were or were not adopted as part of the long-term strategy.

(h) The plan shall include schedules for the implementation of the elements of the long-term strategy.

(i) The long-term strategy shall take into account the effect of new sources; and, for existing sources, the costs of compliance, the time necessary for compliance, the energy and nonair quality environmental impacts of compliance, the remaining useful life of any affected existing source and equipment therein, and the degree of improvement in visibility anticipated to result from control.

§ 51.307 New source review.

(a) For purposes of new source review under the Clean Air Act, the State plan shall provide for written notification of all appropriate Federal Land Managers of any proposed new major emitting facility or major modification that may affect visibility in any Federal class I area. Such notification shall be made in writing and within 30 days of receipt of and at least 30 days prior to public hearing by the State on the application for permit to construct. Such notification shall include an analysis of the anticipated impacts on visibility on the Federal class I area.

(b) The plan shall provide for consideration of any demonstration by a Federal Land Manager, provided within 30 days of the notification required by paragraph (a) above, that such proposed major emitting facility or major modification will have an adverse impact on visibility in any Federal class I area, including any integral vista identified in accordance with paragraph (h) below. Where the State finds that such a demonstration does not adequately support a determination by the State that an adverse impact will result, the State shall provide the Federal Land Manager with such analyses and discussion as supports the State's findings. This must be submitted to the Federal Land Manager in writing and at least 30 days prior to any public hearing on such application or, if there is no public hearing, 30 days prior to issuance of the permit.

(c) Where the State, in consultation with the Federal Land Manager, determines that an adverse impact on visibility in any Federal class I area will result from a new major emitting facility or major modification, the State shall not issue the permit.

(d) The State plan shall provide for the opportunity for review, by the public, of any new major emitting facility or major modification that may have an impact on visibility in any Federal class I area.

(e) The plan shall provide for consultation by the State with the appropriate Federal Land Manager on any application for a new source review permit submitted by any major emitting facility or major modification that may affect visibility in any Federal class I area.

(f) The State may, after considering the recommendation of the appropriate Federal Land Manager, require monitoring of visibility in the Federal class I area near the proposed new major emitting facility or major modification for such purposes and by such means as the State deems necessary and appropriate.

(g) The plan shall provide for an opportunity for consultation, prior to issuance of any new source review permit, with the Agency where a dispute between the Federal Land Manager and the State exists on the issuance of such permit.

(h) The plan shall provide for the protection of integral vistas for Federal class I areas identified in accordance with "Criteria for the Identification of Integral Vistas" as follow:

(1) For Federal class I areas so designated as of the date of promulgation of these regulations.

(i) Integral vistas identified prior to the calendar year in which a complete new source permit application is filed, and

(ii) Identified prior to December 31, 1985.

(2) For Federal class I areas designated after the date of promulgation of these regulations, as identified at the time of redesignation of such area to class I.

(3) The State need not provide visibility protection of a vista identified as integral by the Federal Land Manager, if it determines that such integral vista has not been identified in accordance with "Criteria for the Identification of Integral Vistas."

Supplemental Statement of Basis and Purpose [1]

The following discussion supplements various aspects of the basis and purpose for EPA's proposed regulations on visibility protection.

1. *The phased approach*—Congress required that EPA promulgate regulations to (a) assure reasonable progress toward meeting the national visibility goal set out in Section 169A(a)(1), (b) require BART analyses for existing major stationary sources, and (c) require development of a long-term strategy [Section 169A(a)(4), (b)(2)]. Congress, however, did not address the problem of visibility protection from a scientific perspective since, at the time of the Clean Air Act Amendments of 1977, there was scant technical and virtually no regulatory experience with the protection of visibility. Recognizing this, Congress left the appropriate techniques and methods for implementing the visibility protection program of Section 169A and, indeed, the precise definition of the problem to be addressed to EPA's study and regulations [Section 169A(a)(2), (a)(3), and (b)(1)]. EPA's subsequent study of visibility impairment revealed that man-made visibility impairment manifests itself in various forms. Some of these forms can be attributed to specific sources. EPA has determined, however, that there exist at present limitations in source/impairment relationships which make it impossible in many cases, particularly for multi-source impacts, to predict confidently that a given amount of control will yield a specific degree of improvement in visibility. EPA is thus proposing, as anticipated by the Advanced Notice of Proposed Rulemaking (ANPR), a "phased approach" to these regulations.

This phased approach will permit State control agencies to focus initially on the most clearly defined cases of existing impairment and on strategies to prevent future impairment, while

[1] Note: This statement will not appear in the Code of Federal Regulations.

allowing evolution of additional guidelines and control strategies as scientific understanding of source/impairment relationships improves. EPA received support for this approach in comments from representatives of both environmental and industrial groups.

Even though the Agency has referred to the proposed rules as Phase I the basic structure of the regulations provided today will remain consistent for all phases. These regulations function as the basic framework from which this present program can be implemented and future phases can be incorporated. In other words, the basic plan requirements will remain consistent while only the elements which define the scope of Phase I will change in response to advances in technical knowledge.

2. General definitions.—As explained below several definitions are consistent with the proposed PSD regulations (44 FR 51924). Where modifications are made in the final promulgation, expected shortly, these definitions will be changed accordingly.

A. *"Existing major stationary source"*—Section 169A(g)(7) defines the term "major stationary source"; however, to avoid confusion with the PSD regulations, EPA has defined the term "existing major stationary source" which includes the age limitations specified in Section 169A(b)(2)(A). The proposed definition of "existing major stationary source" follows the definition in Section 169A(g)(7). It is limited to specific source categories with the potential to emit 250 tons or more per year of any pollutant regulated under the Act. The meaning of Section 169A(g)(7)'s definition of "stationary sources with the potential to emit 250 tons per year of any pollutant" depends on the interpretation of "potential to emit" and "stationary source." Since Congress used similar language in Section 169(1) without indicating a change in meaning, it is appropriate to examine what Congress intended in Section 169(1), in interpreting these terms [H. Rep. No. 95-564, 95th Cong., 1st Sess. 155 (1977)]. In *Alabama Power v. Costle*, 13 ERC 1993, the Court has already examined this and the result of this interpretation is the basis for today's proposed definition of "existing major stationary source" as defined in Section 169A(g)(7). Any change in EPA's proposed interpretation of Section 169(1) for purposes of PSD may affect the definition proposed today for visibility unless legal authority and differing program objectives would support different definitions for each program. Specifically, today's proposal defines "potential to emit" as "the capability at maximum design capacity to emit a pollutant after the application of air pollution control equipment." This definition parallels that proposed in the PSD regulations on September 5, 1979 [44 FR 51924]. "Potential to emit" would be calculated on the assumption that air pollution control equipment incorporated into the design of a source will control emissions in the manner reasonably anticipated when the calculation is made. Therefore, whether a source is an existing major stationary source might depend primarily on what control equipment has been incorporated in its design.

The definition of "potential to emit" also states: "Annual potential shall be based on the maximum annual rated capacity of the stationary source assuming continuous year round operation.

Enforceable permit conditions on the type of materials combusted or processed may be used in determining the annual potential." This is consistent with the *Alabama Power* decision which calls for calculation of a source's "potential to emit" based on its "full design capacity" [13 ERC at 2003]. However, this calculation could reflect enforceable permit conditions on the amount of materials combusted or processed. Also, again consistent with EPA's PSD proposal, "Secondary emissions" would not count in determining a source's potential to emit.

In determining whether a source, as defined in Section 169A(g)(7), has the potential to emit 250 tons per year of a pollutant, EPA proposes to take into account all of the emissions of that pollutant—even fugitive emissions, at least to the extent that they are reasonably quantifiable. EPA believes that there is no reason why a source of a particular pollutant should escape the BART requirement merely because the emissions of the pollutant are fugitive, when a source emitting the same pollutant might have to install BART if the emissions are vented through a stack or other opening. In both cases, the emissions could cause or contribute to visibility impairment.

In *Alabama Power*, the Court said fugitive emissions could not be counted in determining whether a source is major unless EPA issues an appropriate legislative rule [13 ERC at 2017]. Today's proposal, therefore, explicitly states that fugitive emissions shall be included in determining the potential to emit for each of the source categories listed in Section 169A(g)(7). Consistent with the Court's holding, the proposal defines "fugitive emissions" as "those emissions which do not pass through a stack, chimney, vent, or other functionally equivalent opening."

As for "stationary" in *Alabama Power*, the Court said that the definition of "stationary source" in Section 111(a)(3) controls the meaning of that term when used in the PSD part of the statute [13 ERC at 2016].

The proposed regulations would define "building, structure, facility, or installation" as "any grouping of pollutant-emitting activities which is located on one or more contiguous or adjacent properties and which are controlled by the same person (or by persons under common control)." This definition would be important in determining whether additions to, or reconstructions of, an existing stationary source in operation before August 7, 1962 would be subject to the BART requirement. For example, a fossile-fuel fired steam electric plant (power plant) of more than 250 million Btu an hour heat input may have been "in operation" before August 7, 1962, but also may have added two boilers in 1967. These two boilers would be considered an "existing major stationary source" if individually or together they had the potential to emit 250 tons a year or more of any pollutant, and if they were of more than 250 million Btu heat input since "source" would, in effect, mean any grouping of pollutant-emitting activities at one site and under common control. The two boilers would also be an "existing major stationary source" if they were "reconstructed." The proposed definition of "reconstruction" is consistent with that in 40 CFR 60.15, dealing with new source performance standards.

In *Alabama Power*, the Court stated that Congress gave EPA latitude to define the component terms of "stationary source" to reflect the purpose and structure of the program for which the definition is intended [13 ERC at 2040]. The purpose of the visibility regulations is to assure reasonable progress toward the remedying of any existing and the preventing of any future impairment of visibility in certain class I areas. Congress structured the program so that the BART requirement would be an important mechanism for achieving one part of that purpose, the remedying of existing visibility impairment. Although the BART analysis itself considers the remaining useful life of the source, cost, and other factors, Congress decided that EPA should not be required by statute to require BART for all sources regardless of age as a minimum condition for SIP approval.

Where a source has had an addition or reconstruction with the potential to emit 250 tons a year of a pollutant

between August 7, 1962 and August 7, 1977, EPA believes that the implicit concern of Congress regarding remaining useful life does not apply to the new components at the site and that, therefore, Congress did not intend to "grandfather" such additions or reconstructions. Such a "grandfathering" approach would be without reason and could seriously undermine progress toward remedying existing visibility impairment. Indeed, preliminary EPA data show that a source cited by Congress in the legislative history of the visibility provisions as causing existing visibility impairment in the Grand Canyon would escape BART review entirely under such a grandfathering approach, even though nearly half its boiler capacity was added since August 7, 1962.

On this basis, EPA believes both the proposed definition of "reconstruction" and "building, structure, facility, or installation" are authorized by the Act and are vital to achieving Congress' purpose.

B. *"In existence" and "in operation"*—The Section 169A requirement for a BART analysis applies only to a major stationary source "in existence" on August 7, 1977 and which, on that date, had not been "in operation" for more than 15 years. EPA has proposed to define "in existence" as meaning "that the owner or operator has obtained all necessary preconstruction or air quality laws or regulations and has either (i) begun or caused to begin, a continuous program of physical on-site construction of the facility 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 construction of the facility to be completed in allowable time." The proposal would define "in operation" as meaning "engaged in activity related to the primary design function of the source." EPA intends a broad interpretation of "primary design function"; thus for example, the production of coke in a steel plant is related to its primary design function, just as is the production of steel.

EPA believes the Act requires that each existing major stationary source that started operation after August 7, 1962 be potentially subject either to the BART requirements or to the PSD requirements as set out in the Clean Air Act Amendments of 1977. EPA specifically solicits comment on whether this interpretation is correct and whether the proposed definition of "in existence" would serve that interpretation.

C. *Reasonably attributable*—The proposed regulations would define "reasonably attributable" to mean attributable by visual observation or other monitoring techniques. This is the mechanism that implements the first phase of the visibility protection program. Thus, if an existing major stationary source emits any air pollutant which can normally be anticipated to cause or contribute to any impairment in an area which impairment can be reasonably attributable to such a source *only* by analytical techniques (i.e., modeling) it will not be subject to a BART analysis in this first phase of the visibility protection program. This definition will likely change in later phases to take advantage of any improvements in understanding of the source/impairment relationship for visibility. EPA specifically solicits comment on this approach to implementing the BART requirement, including whether there are circumstances where current modeling techniques could be employed to indicate that impairment is reasonably attributable to a source.

(3) *Visibility impairment*—EPA is proposing to define "visibility impairment" as any humanly perceptible change in visibility (visual range, contrast, and coloration) from that which would have existed under natural conditions.

The first part of this definition would require that the impairment be humanly perceptible. EPA, in the ANPR, solicited comment on three separate approaches to treating perceptibility as an element of visibility impairment. These were (1) the smallest measurable change in visibility which is detectable by instruments; (2) impairment which is perceptible to humans; and (3) a visually perceptible impairment which is considered significant or adverse. There were no comments received in support of the first approach. Several commenters supported the second approach, which EPA is today proposing, because the Act intends for visibility protection to be primarily directed at preserving the enjoyment and benefits of good visibility for people.

The restriction to perceptibility, as may be observed by humans, is critical. As noted, varying conditions can affect the perceptibility of a specific impact. Additionally, available instrumentation is more sensitive to contrast and reduction in visual range than is the human eye. The Agency feels that the interpretation used in these regulations is correct based upon the Congressional concern regarding visibility. The intent of Congress in including Section 169A in the Act was to protect the public's enjoyment of the class I area and, thus, impacts on visibility which cannot be perceived by a human observer should not be considered impairment in the context of the national visibility goal. As discussed below, the proposed regulations charge the appropriate Federal Land Managers with identifying impairment in an area and EPA expects that, in doing so, the Federal Land Managers will keep the public's enjoyment of that area in mind.

Also, several commenters suggested that the third approach to impairment suggested by the ANPR was the most appropriate because, they argued, Congress intended to remedy only that impairment that is considered significant or adverse. EPA believes Congress, in declaring the national goal of "the prevention of *any* future, and the *remedying of any* existing impairment of visibility" (emphasis added), clearly did not intend that the visibility protection program be directed at only those impacts considered significant or adverse. If this had been the intent, Congress clearly could have stated the national goal as the prevention of *significant* future impairment and the remedying of *significant* existing impairment. This it did not do. In the provisions of Section 169A which provide guidance on the nature of the regulations EPA should promulgate, the concept of "significant impairment" is mentioned only in connection with an exemption from BART (Section 169A(c)). Clearly, it would be nonsensical for Congress to provide an exemption based on a lack of significant visibility impairment if, by definition, visibility impairment could not be other than "significant."

The second part of the proposed definition includes "contrast," as well as "visual range" and "coloration" as expressions of visibility impairment. EPA believes virtually all manifestations of visibility impairment can be expressed by one of these terms. Contrast, as discussed in the Report to Congress, is generally a much more easily understood indicator of visibility impairment and is mathematically interrelated to visual range. One can often perceive and express contrast changes in visibility more easily than changes in visual range or coloration.

Preliminary studies [see *Protecting Visibility: An EPA Report to Congress*] indicate that a contrast change in the range of 0.02 to 0.05 is capable of being perceived by a human observer. The variation expressed is a result of variability in observer sensitivity and

spacing of contrasting objects. Additionally, reductions in visual range as small as 5% may be perceptible to the human observer. Where the impairment is in the form of a coherent plume, the above values will not necessarily be limiting. In this case, other factors, such as a substantial difference in color between the sky and plume, may heighten the viewer's ability to perceive the contrast change. Current efforts to describe visibility impairment in terms of coherence are promising but are, as yet, incomplete. While strict values for contrast and visual range reduction have not been and may never be established, the vicinity of the lower bounds on perceptibility can be estimated. The final determination is, however, related directly to whether the effect could be observed by man. It is important to note that the Agency is continuing to evaluate visibility data and that data obtained from studies conducted in 1979 indicate a range of 0.05 to 0.06 contrast change may be perceptible. Additional studies are being conducted in 1980 to confirm past research.

One commenter on the ANPR argued that Section 169A(g)(5), which says "the terms 'visibility impairment' and 'impairment of visibility' shall include reduction in visual range and atmospheric discoloration," cannot be expanded to include "contrast." This argument contradicts the plain meaning of the statutory language. The use of the words "shall include" in Section 169A(g)(5), clearly indicates that EPA must treat "visibility impairment" as including "reduction in visual range and atmospheric discoloration," but as clear, however, is Congress' intent that Section 169A(g)(5) be inclusive, not restrictive. Congress was explicit when it intended the statutory definition to be restrictive, as shown by the definitions in Section 169A(g) (3), (4), (5), and (7).

That Congress gave EPA discretion to clarify the meaning of visibility impairment is also supported by Section 169A(a)(3)(A). That section requires EPA to study and report to Congress "on available methods for implementing the national goal." That report must include recommendations for:

"[A] methods for identifying, characterizing, determining, quantifying, and measuring visibility impairment in [mandatory class I Federal areas]."

This language unmistakably indicates Congress' intent that EPA has discretion on how broadly "visibility impairment" should be defined to effectuate the national goal. This discretion was not solely for purposes of the Report to Congress. Section 169A(b)(2) says the visibility regulations shall "take[e] into account the recommendations" in the Report to Congress. EPA's careful study of the visibility problem, including that contained in the Report to Congress, supports the definition of "visibility impairment" proposed today and, therefore, it is authorized.

Finally, the definition of impairment restricts impairment to that resulting from human activities, i.e., impairment which would not have existed under natural conditions. While visibility may be degraded as a result of natural causes, Congress clearly limited the scope of the national visibility goal by including only "impairment [which] results from manmade air pollution." Although the determination of natural conditions would be difficult and is to some extent dependent on the monitoring research being done, as discussed elsewhere in this notice, EPA believes such a determination will not be critical to some aspects of the first phase of the program. If impairment can, by visual means, be reasonably attributed to a source, the determination of whether the impairment is man-made involves no precise measurement of natural conditions.

The remedying of existing impairment will require the control of certain existing sources and, therefore, in some circumstances it may be appropriate to evaluate the potential improvement in visibility against existing conditions. However, as we approach the national goal the impact of new sources will become more perceptible and since new sources are expected to last longer than existing sources their impacts should be evaluated against natural conditions which would exist in the absence of man-made impairment. It will therefore be important to attempt to provide some assessment of natural and existing conditions. Although such an assessment will be difficult, one method of achieving this would be through an analysis of available information to determine the best visibility that currently exists in an area. In making this assessment the State should recognize that frequently visibility is dependent upon seasonal factors. As such, available information should be subdivided into seasonal patterns. The seasonal best visibility would then be chosen on the basis of seasonal variations in naturally occurring phenomena which would then represent natural conditions. Of course one valuable method for obtaining data is through visibility monitoring. Although the Agency is currently evaluating monitoring techniques, these proposed rules would require the State to develop a monitoring strategy which would include a strategy for assessing natural conditions and provide for the reevaluation of natural conditions based upon new data for the purpose of assessing new source impacts on visibility.

(4) *Significant impairment*—The proposed regulations define significant impairment as "visibility impairment which, in the judgment of the Administrator, interferes with the management, protection, preservation, or enjoyment of the mandatory class I Federal area, including interference with and impairment of the visitor's visual experience. This determination shall be made on a case-by-case basis taking into account the extent, intensity, and duration of the impairment frequency and time of occurrence of the impairment, the correlation between times of visitor use and access to the mandatory class I Federal area and the frequency of occurrence and timing of natural conditions."

The Agency believes that while the national goal calls for "the prevention of *any* future, and the remedying of *any* existing impairment in visibility" (emphasis added), by establishing exemptions in Sections 169A(c)(1) and 169A(c)(2) of the Act, Congress clearly recognized that there may be circumstances where impairment may exist but, due to the circumstances surrounding that impairment, reduction or elimination of the impairment may not be appropriate.

Secondly, in determining whether impairment is significant, the Administrator will evaluate:

(a) How frequently the impairment occurs,

(b) The extent or degree of the impairment,

(c) The time at which the impairment occurs,

(d) The intensity of the impairment, and

(e) The duration of the impairment.

There are clearly cases where impairment may exist but does not interfere with the public's enjoyment of the mandatory class I Federal area as pointed out by several commenters. An example may be where the impairment occurred only when visitor use was negligible or nonexistent. Since the intent of Congress, through Section 169A, is to protect the public's enjoyment of these areas, impairment which does not affect public enjoyment should not be considered significant. The Administrator will consider the recommendations of the appropriate Federal Land Manager since the Federal Land Manager has expert knowledge of an area.

(5) *Reanalysis of BART*—Proposed Section 51.306(e) would require that BART be reanalyzed at such times as the Administrator determines that new technology exists for the control of a pollutant having an impact on visibility. The basic purpose of this requirement for reanalysis is to ensure the maximum opportunity for the consideration of new technology for the control of visibility impairment.

Where a source has had to retrofit controls for a pollutant as a result of a BART analysis, EPA believes that there may be instances where the source should not later be subject to a different requirement for retrofit control of that pollutant. However, EPA believes that, as a part of its long-term strategy, a State should reevaluate such existing major stationary source for the applicability of new controls for all pollutants. Since the State would be free to require additional controls for a pollutant even where BART has previously been required for that pollutant the State may desire to do so as part of its long term strategy. Where the control representing BART has not been previously required for a pollutant reanalyzed at the source, the State must require the imposition of such control as indicated by this reanalysis. This reanalysis must also include a consideration of in-place controls.

EPA recognizes that a broader "grandfathering" of sources which have applied BART controls could insulate such sources from future BART requirements for a pollutant even if the previous BART control was minimal. For example, a power plant would have an incentive to modify its burners to reduce emissions of NO_x in response to a BART analysis in order to escape further BART requirements for NO_x even though much more effective control technology may become available in the future. EPA, thus, specifically invites comments on this and other approaches to the problem. Several alternatives commenters may wish to address are:

(1) Requiring reanalysis of sources and imposition of controls on pollutants regardless of previous BART determinations.

(2) Requiring automatic, periodic review of all BART determinations;

(3) Requiring reanalysis of sources and implementation of controls as a reasonable progress measure;

(4) Requiring reanalysis of BART for all pollutants during each new phase of regulatory development; and

(5) Not requiring reanalysis.

Commenters are encouraged to include a discussion of the legal and policy basis for any alternatives recommended.

6. *Visibility monitoring*—Many commenters addressed the issue of visibility monitoring. Many of these comments dealt with whether EPA, the State, or the Federal Land Manager should have the primary responsibility for visibility monitoring. Today's proposal recognizes the need for cooperation and consultation in the area of visibility monitoring, not only in the area of instrumentation but in the use and interpretation of data obtained. Although EPA will be continuing research in the area of visibility monitoring, primarily for the purpose of developing EPA-approved standardized ("reference method") visibility monitoring techniques and data collection for validation of analytical techniques, this proposal would require the consideration of visibility monitoring and data in two aspects. The first of these areas is the development of a visibility monitoring strategy. The Agency believes that the use of available monitoring data and the collection of supplemental data can serve the State well in preparation of the SIP revision and the assessment of the long term strategy's ability to make reasonable progress toward the national goal. In this strategy the State is expected to discuss the use of visual observations and other monitoring techniques as decided upon by the State after consultation with the Federal Land Manager. It is anticipated that the supervisor of the particular mandatory class I Federal area will be able to provide some assessment over a period of time as to the impairment that exists or may not exist in the area. Where agreements of this type can be reached they should be incorporated into the monitoring strategy.

The second aspect of visibility monitoring is the consideration of the need for monitoring associated with a proposed major emitting facility or major modification. The permitting authority should consult with the Federal Land Manager on the individual decision and take into account available visibility monitoring data and the need for additional monitoring data. The authority can require new sources collect such data under the auspices of the PSD program. Where necessary, additional assistance can be obtained through the EPA Regional Offices.

Though the Agency is not prepared to promulgate "reference methods," there is substantial information available regarding visibility monitoring methods currently in use. A discussion of techniques currently in use and under evaluation for visibility monitoring may be found in "Protecting Visibility: An EPA Report to Congress." Interim guidance on monitoring is expected to be released by the Agency in the near future. After appropriate public review and comment, the interim guidance will be incorporated by reference in the promulgated visibility regulations. A **Federal Register** notice will announce the document's availability.

7. *Visibility modeling*—Almost all commenters on the issue of visibility modeling agreed with the position set forth in the ANPR that visibility models should be used only with a recognition of their limitations. However, a substantial number of commenters expressed the opinion that limitations on visibility models were so substantial as to totally preclude their use. As noted in the ANPR, the Agency is attempting to validate several analytical techniques for the purpose of addressing visibility impacts. The Agency believes that although these techniques are currently unvalidated, they can provide valuable input in the decision-making process when combined with common sense interpretations of all available data. The Agency believes that the proposed regulations recognize both the limitations and the presence of these analytical techniques.

EPA is currently attempting to validate these techniques through various research programs, and will make available for public review and comments these results as soon as they are available. Additionally, the Agency is preparing interim guidance on the use of analytical techniques and will also make this available for review and public comment.

Results obtained from visibility analytical techniques may be useful in addressing the impacts of single sources on visibility in two parts of this proposed rule. The first of these is the BART guideline, the use of which is optional except for power plants with a generating capacity in excess of 750 megawatts. This guideline suggests the use of analytical techniques to estimate the degree of improvement anticipated from control of certain pollutants. The techniques would estimate the level of impairment under existing conditions and compare it with the impairment estimated by the "model" under a new control scenario. EPA specifically solicits comment on whether this comparison to existing conditions is appropriate in all circumstances, for example, where existing impairment may be attributed in part to other sources which have not been required to install reasonably available control technology.

EPA does not believe these predicted levels of impairment should be used in

an absolute manner for all pollutants. Instead, the Agency intends that the predicted levels of impairment only be used to assess the relative improvement that may be achieved under the new control scenario. However, EPA believes it is important to qualify this predicted relative improvement with all available data. For example, it would be useful to compare the impairment resulting from an actual source similar to the analyzed source to that estimated under the new control scenario. Thus, the guideline requires the estimated relative improvement to be qualified by other available data. While the above discussion qualifies the use of analytical techniques, it is important to remember that any such analysis should use all available tools recognizing that such provides valuable information relevant to the analysis and the limitations on the tool should be recognized.

The other program area for which analytical results can be of value is in the evaluation of visibility impacts from new sources. An interim guidance document for the assessment of these new sources is being developed and will be made available for public comment.

8. Intergovernmental cooperation—The Agency received 20 comments pertaining to the roles of States, Federal Land Managers, and EPA in the development and implementation of visibility regulations. Nine commenters felt the regulations should be structured to provide authoritative input form the Federal Land Managers. Others felt the Act gave the State final decision-making authority and the Federal Land Manager only an advisory role.

The regulations, as proposed, provide an active role for both Federal land Managers and States. The Federal Land Managers are guaranteed input into the SIP revision process, including identification of integral vistas and concurrence on any BART exemption. The State, however, retains final authority for the development of the SIP, BART determinations, and implementation of the visibility program. EPA would remain primarily in a technical and policy advisory position, continuing research on visibility and developing Phase II regulations when it becomes technically feasible.

EPA believes the visibility program should truly be a cooperative one. While the States are aware of local conditions and preferences, the Federal Land Managers remain most familiar with conditions unique to the parks and wilderness and the importance of the visibility values to the visitor experience in an area. The regulations are structured to provide input into the decision-making process by both the States and the Federal Land Managers, but EPA believes for the visibility program to be a viable one, all affected parties must work together.

Several commenters were also concerned that the subjective judgment of the Federal Land Managers may be given too much weight. These commenters suggested that objective guidelines or specific minimum criteria be applied to any decision by the Federal Land Managers. Under the proposal, judgments by the Federal Land Managers will be necessarily somewhat subjective because visibility is a perceived quality and difficult to quantify. However, many of these decisions, such as identification of integral vistas, are to be made according to EPA guidelines or criteria which will provide consistency and prevent random, capricious determinations. Others will be made in coordination with the States or with assistance from EPA.

9. Protection of integral vistas—The proposed regulations would require a State to protect any integral vistas which are identified by the Federal Land Manager within 90 days of the promulgation of these regulations, unless the State in its SIP demonstrates to the Administrator that the Federal Land Manager did not identify the vista according to the criteria set out in "Criteria for the Identification of Integral Vistas". A vista identified by the Federal Land Manager more than 90 days after promulgation would have to be protected for visibility not later than at the time of the periodic review of the long-term strategy.

The reason for the 90-day period for identification of vistas to be affected by this first phase of visibility SIP revisions is that the Act requires SIPs to be revised within 9 months of the promulgation date and, in order for a state to meet this deadline, it will need to know within 90 days of the promulgation date what integral vistas must be protected in that revision. Some Federal Land Managers have informed EPA that identification within the 90-day period will be possible, although difficult, to meet while others have commented that, because of the need to integrate visibility protection with planning for certain other management objectives, identification of vistas within 90 days of promulgation is unlikely.

Under the proposed regulations, the decision when and whether to identify an integral vista is primarily the responsibility of the appropriate Federal Land Manager who, under the Act (and the legislation creating an area), has a special role in protecting the values of an area.

Although EPA recognizes the difficulties in identifying the vistas within 90 days, it believes in most cases the appropriate Federal Land Manager should be able to identify the integral vista within that time. All the areas have already been analyzed pursuant to action under Section 169A(a)(2) to determine whether visibility is an important value. Also, since it seems unlikely that EPA will promulgate these regulations before November 1980, the time by when the integral vistas must be identified to receive protection in the first phase of SIP revisions for visibility is still many months away. EPA is releasing the identification criteria for public comment along with this proposal and it should be possible for the Federal Land Managers to take preliminary steps now to prepare for the identification of integral vistas, even though the criteria may change in light of comments received. For example, one important criterion unlikely to be changed by public comment is whether the legislation creating an area specifically mentioned an integral vista as a reason for its being given special protection. It is important to note that the identification criteria present two different techniques for the final identification process. Comment is specifically requested on the appropriateness of both techniques.

Over the next few years Federal Land Managers will be developing area management programs which could include identification of additional integral vistas to be protected. As a result EPA has proposed a procedure which affords protection of integral vistas which have been identified by the Federal Land Manager prior to the calendar year in which a new source submits a complete permit application. However, EPA believes that this procedure could result in some uncertainty for new sources and therefore has proposed that no additional vistas be identified beyond December 31, 1985 for any Federal class I area which exists at the time of promulgation of these regulations. Additionally, the proposed procedure would allow a new source to escape the requirement for protection of an integral vista that may have been identified nearly a year before, by submitting a complete application late in the calendar year in which the vista was identified. The Agency also believes that the procedures for the reclassification of Federal Lands to class I should also involve the identification of integral vistas in order to prevent such uncertainties in the future. The Agency specifically solicits

comments on whether this procedure will result in too much uncertainty for new sources between now and December 31, 1985 and on other systems which could be used to accomplish the objective of protecting new integral vistas while providing time for the Federal Land Manager to develop management plans for their areas. Based upon the comment received, EPA may retain, modify, or delete this requirement. Three alternatives which the Agency is soliciting comment on are:

(1) providing protection for integral vistas identified at least a minimum time period prior to the submission of a complete application,

(2) a requirement that the source consult with appropriate Federal Land Manager at some designated interval prior to submission of the application and requiring protection of vistas identified within a specific time period after that consultation, and

(3) a provision which allows the Federal Land Manager to identify additional integral vistas within 30 days of being notified about a new source permit.

EPA recognizes that there are other procedural mechanisms that could be devised for identifying integral vistas. One alternative might be a procedure like that in Section 169A(a)(2) of the Act, whereby the Federal Land Managers recommend integral vistas to EPA, and EPA then promulgates the list with any change it feels is appropriate. EPA believes the proposed approach avoids the unnecessarily protracted process involved in this alternative, but specifically solicits comments on this and other alternative procedure for identification of integral vistas.

There has been comment that Congress did not intend to protect vistas which include places outside the boundaries of mandatory class I Federal areas. This intent is expressed, these commenters say, in the plain language of Section 169A(a)(1) which identifies the national goal of visibility protection "in" mandatory class I Federal areas. Examination of the statutory language and legislative history, however, reveals that they both support EPA's position and that removing integral vistas from protection would seriously undermine the purpose of Section 169A.

EPA's proposal agrees with the plain language of Section 169A. It protects no views into a class I area from outside the area as some commenters urged. The only visibility values protected are those "in" a mandatory class I Federal area, just as Section 169A provides. This follows because "visibility" is a perceptual value and the perception occurs "in" an area.

In identifying the visibility values of a mandatory class I Federal area, both the House and Senate Report counsel attention to the fundamental purposes for which Congress established such lands, and both quote the 1916 National Parks Organic Act [16 U.S.C. Section 1] that the purpose of such lands "is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" [H. Rep. No. 95-294, 95th Cong., 1st Sess. 137 (1977), S. Rep. No. 95-127, 1st Sess. 36 (1977)]. In 1978, Congress amended this act to "reaffirm" this purpose and direct that the "protection of [areas of the National Park System] shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of values and purposes for which these various areas have been established, except as may have been or shall be directly or specifically provided by Congress" [16 U.S.C. Section 1a-1]. The specific legislation establishing the mandatory class I Federal areas cited in many cases the magnificent scenery of the area as a reason for its establishment [44 FR 69122 (November 30, 1979)]. Congress, in framing the visibility regulations, clearly was aware that many of these areas were set aside because of their "extensive vistas, expansive scenic views, unique natural formations or primitive value" [123 Cong. Rec. 35571 (daily ed. June 6, 1977)]. EPA's proposal carries out Congress' intent that air quality-related values (including visibility) be protected. These values include vistas, regardless of the location of the places viewed, if they are an integral part of the visibility experience in an area. Some areas may have no integral vistas; others may. For example, the view from Mesa Verde National Park of Shiprock (New Mexico), a unique natural feature, could be identified as essential to the public enjoyment and values of the park. By requiring the participation of interested persons and a careful analysis of pertinent criteria, the proposal ensures that integral vistas will not be identified carelessly as an air quality-related value of the area but, rather, that any such identification will result from a prudent, circumscribed effort.

The legislative history contains many references to the "grand," "distant," and "breathtaking" "vistas" and "panoramas" of mandatory class I Federal areas which merit visibility protection [See, e.g., H. Rep. No. 95-294, supra, at 148, 204, 205; 123 Cong. Rec. 18601, 18609 (daily ed. August 4, 1977)]. In addition, Congress repeatedly stressed that public enjoyment of the parks and the economic benefits tourism brings were reasons for protecting visibility in mandatory class I Federal areas [See, e.g., H. Rep. No. 95-294, supra, at 204]. Even opponents of far-ranging protection against deterioration of air quality recognized that "visibility" means the ability to see distant places and panoramic sweeps like the view from the top of a mountain, and that such visibility is a requisite to the full enjoyment of mandatory class I Federal areas [123 Cong. Rec. 35249 (daily ed. June 9, 1977)]. Nowhere is there the suggestion that grand vistas integral to public enjoyment of a mandatory class I Federal area were not entitled to protection if the place viewed lay outside the area. The reason is clear: denying such integral vistas protection would compromise Congress' intention to preserve the scenic values for which the area was created and which the public enjoys.

Another commenter inquired whether EPA intends to interpret the word "within" in Section 165(d)(2) to include integral vistas. As noted previously, EPA has promulgated PSD regulations implementing this section and this aspect of the regulations was not at issue in the *Alabama Power* decision which adjudicated various other issues relating to those PSD regulations. Whether a Federal Land Manager considers an integral vista to contribute to a visibility value of an area is for him to decide; he has the "affirmative responsibility" to protect those values. Although, as stated, EPA does not intend to change its PSD regulations regarding visibility protection, EPA does interpret both the statute and its PSD regulations as authorizing the protection of integral vistas. Congress could not have intended such vistas to be protected by one program and impaired by the other.

EPA urges that proposed major emitting facilities, early in the planning process, discuss with the appropriate Federal Land Manager the visibility values of the area including the existence of any integral vistas.

15. *Section 51.306 Long-Term Strategy—Consistent* with Section 169A(b)(2)(B), the proposed regulations would require each plan to contain a long-term strategy for making reasonable progress toward meeting the national goal. The proposal requires the strategy to contain several measures and suggests others the State should consider in devising the "mix" of measures appropriate for the particular

mandatory class I Federal area circumstances.

Because of the limited applicability of BART requirements, the development of long-term strategies will be central to making reasonable progress toward the national visibility goal. Consequently, EPA views the requirement as an exceedingly important one, even though it will be necessarily somewhat limited by the phased approach to the visibility program as discussed above. The long-term strategy can, however, begin to address the more complex problems such as regional haze. For example, although visibility impairment resulting from multi-source situations may not be reasonably attributable to any specific source, other programs for control of such sources should consider the impact, to the degree possible, of control decisions on visibility.

The ANPR suggested that, as an element of a long-term strategy, EPA might require the setting and meeting of reasonable progress visibility objectives. Today's proposal would not require specific objectives because EPA believes such objectives could be unduly rigid, easily misinterpreted, and difficult to assess. The proposed regulations would, however, require periodic review by the State and a report to the public on the efficacy of the long-term strategy. This review would primarily assess the effectiveness of the long-term strategy and in this way may be viewed as objective oriented.

Also required would be review of the impacts of all pollutants emitted by a source previously analyzed for BART when the Administrator determines that new control technology is available. Although the proposal would not automatically require the installation of additional control equipment for a pollutant for which a BART analysis has already imposed retrofit control, a State would have to do the analysis to determine whether additional retrofit control for the pollutant would be a sensible step toward the national visibility goal. In many cases EPA believes it would be a sensible step and, therefore, urges States to require imposition of retrofit control for any pollutant regardless of its control history if a BART reanalysis to consider new control equipment indicates such retrofitting is appropriate.

The proposal would require all new major emitting facilities and major modifications, as those terms are defined in EPA's PSD regulations, 40 CFR 51.24 and amendments, to be reviewed for their impacts on visibility for any area listed in 40 CFR Part 81, Subpart D. EPA is currently preparing a guideline for such review. This requirement will ensure that any major new source that may impact visibility in any of these areas will be reviewed for such impacts. For example, a source located in a nonattainment area may not be reviewed under the PSD program for visibility impacts in such areas [*Alabama Power*, supra, 13 ERC at 2016].

Proposed Section 51.306(f) sets out certain measures which the State must consider in developing its long-term strategy. Although the State may develop its own particular "mix" of measures, the long-term strategy must be sufficient to make reasonable progress toward the national visibility goal. In evaluating the adequacy of the long-term (10–15 years) strategy, EPA will consider whether the elements incorporated provide sufficient consideration of impacts on visibility so that reasonable progress toward the national goal is a reasonable assumption. In order to ensure this, many of the elements are mandatory, and the State must explain why it did or did not incorporate the optional elements.

An essential starting point in developing long-term strategies is assessment of other air pollution related control programs. Many of these programs, such as SIP emission limits and compliance schedules for attainment and maintenance of the national ambient air quality standards, new source performance standards, motor vehicle emission standards, and PSD will likely contribute to making reasonable progress toward the national visibility goal. Once the impact of these and other regulatory programs is evaluated, the need for additional measures can be assessed.

Additional measures that must be considered include additional emission limitations and schedules for compliance, source retirement and replacement schedules, and smoke management techniques. Whether all of these measures (or other ones) are necessary to a long-term strategy for making reasonable progress toward meeting the national visibility goal depends on the particular circumstances of the area. Many commenters to the ANPR favored this flexible, area-specific approach. Others, however, felt EPA should establish a national visibility objective along with well designed timetables to monitor reasonable progress. EPA believes that regional differences in meteorological conditions around the country and varying degrees of visibility impairment and land management practices in and around the class I areas should be reflected in the visibility program. EPA's proposal would allow for this; setting a national visibility objective would not. The proposal is consistent with the Act and its legislative history which also required the BART analysis to consider local factors and recognized that a national visibility standard would be "impracticable" [H. Rep. No. 95–294, supra, at 205].

One area-specific measure, control of prescribed burning, i.e., burning for agricultural and forestry management purposes, will need to be considered in certain areas. Substantial comment was received on prescribed burning, its importance to forest and range management, and ability to influence its extent, timing, and duration. One comment suggested that prescribed burning was not man-made (a natural part of many ecosystems) and, thus, did not constitute "visibility impairment." Others noted the impacts of smoke from prescribed burning. EPA recognizes that prescribed fire is an ecologically sound forest and range management tool used both inside and outside class I areas. The Agency does not intend that prescribed burning be eliminated or unnecessarily restricted, but rather, that its impacts on visibility be reduced where feasible and appropriate. Prescribed burning is a necessary part of land management but EPA believes there are techniques to limit its effect on visibility. EPA has requested the Forest Service, U.S. Department of Agriculture, in coordination with land management and air regulatory agencies, to prepare a management guideline for the use of techniques to manage smoke from prescribed fires. It is anticipated that this guideline will not only include evaluation of alternatives to burn but will also suggest best management practices for minimizing adverse effects of smoke. This document is scheduled for completion in early 1981 and EPA intends to make a draft of the guideline available for public comment when it is completed.

(11) *Application of section 169A to new sources*—Today's proposal limits the BART requirements to certain existing sources, but applies the other requirements of Section 169A (such as the strategy for making reasonable progress toward the national goal) to new sources as well. Although EPA has received comment that the requirements of Section 169A apply to existing sources only, the Agency feels the plain language and legislative history of the visibility provisions support this proposal, as does common sense.

The plain language of Section 169A shows that this section is not limited to existing sources. The national goal

toward which the regulations must assure reasonable progress encompasses not only the "remedying of any existing" impairment of visibility, but also "the prevention of any future" impairment [Section 169A(a)(1)]. The recommendations in the Report to Congress, which are to be taken into account in the regulations, must include "methods for preventing and remedying * * * manmade air pollution and resulting visibility impairment" (emphasis added) [Sections 169A(a)(2)(C), (b)(1)]. While the BART requirement in Section 169A(b)(2)(A) focuses on control of existing sources, subparagraph (B) expressly requires "a long-term [ten to fifteen years] strategy for making reasonable progress toward meeting the national goal." There is no indication that a 15-year plan must be restricted to only existing sources.

The language of other sections of Part C of Title I of the Act underscores the intent to apply Section 169A to new sources in order to prevent future air degradation. In section 160, Congress states the purposes "of this part." "This part," means Part C. Part C includes Section 169A. Since nearly all the purposes in Section 160 relate to future goals and activities, and hence to new sources, it is apparent that Section 169A applies to new as well as existing sources. Similarly, Section 167, which is also in Part C, mandates enforcement action by the Administrator "to prevent the construction of a major emitting facility which does not conform to the requirements of this part. . . ." If Congress had intended this enforcement authority to be limited to PSD requirements, it would have referred to "this subpart." But using the term "this part," Congress included Section 169A. There would be no necessity to include the requirements of Section 169A in Section 167 unless Section 169A applied to new as well as existing sources.

The comment that Section 169A is limited to existing sources misstates the plain language of the Act and addressed two passages in the legislative history. The first is from the Conference Report:

"A major concern which prompted the House to adopt the visibility protection provision was the need to remedy existing pollution in Federal mandatory class I areas from existing sources. Issues with respect to visibility as an air quality value in application to new sources are to be resolved within the *procedures* for prevention of significant deterioration." (emphasis added) H. Rep. No. 95-564, supra, at 155.

This passage simply recognizes that existing sources, in addition to new sources, must be controlled in order to make progress toward the national goal and that, for purposes of visibility protection, program procedures for new sources and those for existing sources be dovetailed so as to minimize any bureaucratic burden. Nothing in this passage, however, is inconsistent with EPA's proposal. The second passage is Senator Muskie's response to Senator McClure's question whether Section 169A applies only to existing sources. Senator Muskie replied:

"Yes, the Federal interest is limited to existing sources, which have been in existence 15 year or less. Visibility protections with regard to new sources would result under the [PSD] provisions." 123 Cong. Rec. S14709 (daily ed. Aug. 4, 1977).

Senator Muskie, however, is apparently speaking of the BART requirement being limited to existing sources and, like the conference report, of the desire to dovetail new source visibility requirements with PSD procedures.

Thus, these two passages of the legislative history, taken alone, do not support the commenter's position nor do they justify deviation from the plain language of the statute. Further, the House Committee left no doubt that Section 169A was intended to apply to new sources:

"* * * the committee recognizes that one mechanism which has been suggested for protecting these areas, the mandatory class I increments of new Section 163 [subpart 1 "Prevention of Significant Deterioration"] do not adequately protect visibility in class I areas.

* * * In light of the foregoing, the committee concluded that a separate approach was necessary to control the visibility problem, in mandatory Federal class I areas.

* * * The committee recognizes that [the national] goal cannot be achieved overnight. But the very difficulty of curing existing problems after the fact argues strongly for a strong preventive approach for the future." Rep. No. 95-294, supra, at 205-206.

The opponents of the measure in the House Committee also agreed that it would apply to new as well as existing sources. Id. at 529.

The conference committee report indicates that "[t]he conferees agreed to the House provision [on visibility protection] with modifications." The point, noted above, that the conference report does not in any way indicate that the substantive requirements of Section 169A were applicable only to existing sources was underscored by various House members:

"* * * as in the House bill, [Section 169A] as agreed to in conference applies both to new and existing sources. As pointed out in the House Committee report, merely meeting class I increments under prevention of significant deterioration will not be adequate to assure visibility protection. Clearly the conferees did not want to impose two separate pre-construction permit requirements for a new source for the purpose of assuring compliance with requirements. One permit should suffice." 123 Cong. Rec. 19863 (daily ed. Aug. 4, 1977).

Rep. Rogers provided further explanation on this point in his statement accompanying the technical amendments to the 1977 Clean Air Act Amendments (P.L. 95-190):

"It was suggested that the apparent conflict between the reading of some Senators and the House view on the visibility section [section 169A] should be resolved by a technical amendment. However, such an amendment seems unnecessary to me. The conference provision essentially adopted the House bill's approach. This is made clear at page 155 of the conference report. Nowhere in the conference report is it suggested that any limitation of the provision to existing sources was adopted by the conferees. While the report recognizes that '[a] major concern which prompted the House to adopt the visibility protection [provision] was the need to remedy existing pollution,' it does not state, nor does it imply that 'existing sources' were the only concern. As the House Committee report makes clear, new sources were also of concern. [H. Rep. No. 95-294]. What sense would it make to solve existing problems, but allow the same situation to develop as a result of new sources?

The conference committee, of course, did not want to subject new sources to two separate procedural steps under the PSD and visibility protection provisions. That is why the conference report states, 'issues with respect to visibility * * * in application to new sources are to be resolved within the *procedures* for prevention of significant deterioration.' (emphasis added). But in the one-stop permit process for new or modified major sources, the substantive criteria and standards of PSD and visibility provisions would have to be met. This point is underscored by the statutory language of section 169A(a)(1) retaining as a national goal the prevention of any future * * * impairment of visibility in mandatory class I Federal areas. Given this clear statement of legislative intent, I do not believe any technical or conforming amendment is necessary." 123 Cong. Rec. 35409 (Nov. 1, 1977).

To answer Rep. Rogers' rhetorical question, it would make no sense to create a visibility program which attacks the problem by controlling older sources, but allows new sources simultaneously to create the problem anew. In effect, this would ignore the portion of the national goal calling for the prevention of new impairment.

(12) *Visibility Protection of Non-Mandatory Class I Lands*—The regulations required by Section 169A are limited to mandatory class I Federal areas where visibility is an important value [Section 169A(b)(1)]. In contrast, Section 165(d)(2), which concerns new

sources, applies to Federal lands in all class I areas. As noted above, EPA's PSD regulations also are not limited to "mandatory class I Federal areas," and this aspect of the regulations was not at issue in *Alabama Power*. This means that Federal Land Managers also have an "affirmative responsibility" to protect air quality-related values with respect to Federal lands that are redesignated class I by the States (or Congress). This direction to Federal Land Managers to respect State redesignations is consistent with the general principle in the Act to recognize State's authority to set stricter standards than the Act requires [Sections 116, 304].

The legislative history supports this interpretation. The summary and the discussion of Section 165(d) in the Senate Report express no intention to limit the air quality-related values test to mandatory class I Federal areas, but instead consistently refer to "class I areas." S. Rep. No. 95-294, supra, at 35-36. The Conference Report says flatly that the "air quality-related values test, including visibility, is applied to sources affecting class I areas" [H. Rep. No. 95-564, 95th Cong., 1st Sess. 153 (1977)]. Statements by conferees during House debate on the Conference Report corroborate this construction [123 Cong. Rec. 18803, 18860 (daily ed. August 4, 1977)].

Section 165(d) does not, however, apply to redesignations of reservation land to class I by Indian tribes. This is because Indian land is not Federal land, and Indian tribes are not Federal Land Managers. The Act treats separately lands within the boundaries of Indian reservations and lands subject to the jurisdiction of Federal Land Managers.

It is the "Federal Land Manager * * * charged with direct responsibility for management of any lands within a class I area" that Section 165(d)(2) gives an "affirmative responsibility to protect the air quality related values [including visibility] of any such lands within a class I area." Section 302(i) defines "Federal Land Managers" as, "with respect to any lands in the United States, the Secretary of the department with authority over such lands." This definition dropped the language from the Senate bill which included as Federal Land Managers "Indian tribes which have legal jurisdiction over tribal lands" [S. 252, 95th Cong., 1st Sess. Section 6 (May 10, 1977)]. This does not appear to have been inadvertent, since the Conference Report states the Federal Land Manager is "the Secretary of the Department which has the authority over any specific *Federal land*" (emphasis added) [H. Rep. No. 95-564, 95th Cong., 1st Sess. 172 (1977). Thus, Indian tribes are not Federal Land Managers.

As for the term "Federal land," Congress intended it to "hold its traditional content, and imply no new departure from definitions or systems of classifying Federal lands and land-related rights" [S. Rep. No. 95-127, supra, at 34]. The traditional position of the Department of the Interior has been that lands within lands within Indian reservations are not Federal lands. There is, therefore, no Federal Land Manager to be charged with the "affirmative responsibility" of protecting under Section 165(d) Indian Lands redesignated class I. This interpretation is consistent with Part C of the Act which treats Indian lands uniquely and sets out in Section 164(e) a mechanism for protection of the air quality-related values of Indian lands affected by a redesignation.

(12) *National Emission Standards for Visibility*—One commenter suggested that the agency establish uniform national emission standards for the major stationary sources, but this would violate the intent of Congress which, in regard to the determination of BART, is clearly stated in Section 169A(b)(2)(A): "each major stationary source * * * shall procure, install, and operate, as expeditiously as practicable [and maintain thereafter] the best available retrofit technology, *as determined by the State*" (emphasis added). Section 169A(b) requires BART for large fossil-fuel fired power plants (750 MW) to "be determined pursuant to guidelines promulgated by the Administrator * * *" However, the *only* general authority of the administrator to determine BART for specific sources is for plans promulgated by the Administrator where the State has failed to fulfill the requirements of the Act. The Bart considerations include available technology, the costs of compliance, the energy and nonair quality environmental impacts of compliance, any existing pollution control technology in use at the sources, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. Each of these considerations is source-specific and, therefore, BART must be decided on an individual source-by-source basis. Indeed, the conference committee specifically eliminated the regulations and Federal guidelines for determining this technology required by the House passed bill for determining BART except for fossil-fuel fired generating power plants having a total generating capacity in excess of 750 megawatts [H. Rep. No. 95-564, Supra, at 153]. The BART guideline for these large power plants is available for public review and comment (See Document Availability). Commenters should recognize that the retrofit of control technology is usually much more expensive than the incorporation of similar technology during construction of a new source. The Agency particularly solicits all available factual information on the cost of retrofitting control technology on existing large power plants.

(14) *Baseline*—In the ANPR, EPA introduced the term "baseline," stating that it might be useful in defining certain other terms used in the visibility program. The ANPR did note, however, that both of the contemplated definitions of "baseline" had drawbacks. Today's proposal does not use the term. EPA believes its use, as indicated by the comments received, would lead to confusion.

(15) *Plume blight*—Fifteen commenters expressed opinions on the definitions of plume blight and regional haze presented in the ANPR. EPA's intent in the ANPR was to focus on clearly definable cases of visibility impairment for purposes of Phase I regulations. The comments indicated that the term "plume blight" caused some confusion. Therefore, the Agency is defining the scope of the Phase I regulations by the term "reasonably attributable," which is defined as attributable to a single source or group of sources by visual observation or other monitoring technique. The key distinction between this Phase I definition and future phases is by what means a source can be identified. Most sources which contribute to long range transport visibility impacts cannot be adequately assessed for their impacts on such impairment at present. As mentioned previously, these forms of impairment will be dealt with in future phases of the program.

One commenter felt water vapor should not be considered as visibility impairment. EPA agrees with this assessment. Water vapor plumes are generally confined to an area near the source and should not have an impact on visibility in a mandatory class I Federal area. However, there are cases in which the steam from an industrial process combines with other substances such as SO_x or NO_x. This is not considered water vapor by the Agency and could be identified as visibility impairment.

[FR Doc. 80-15525 Filed 5-21-80; 8:45 am]

BILLING CODE 6560-01-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 51

[AD FRL-1671-8, Docket No. A-79-40]

Visibility Protection for Federal Class I Areas

AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Final rulemaking.

SUMMARY: Today's action promulgates regulations to assure reasonable progress toward "the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution." The responsibility for developing the program and making any substantive decisions will lie with the thirty-six States which contain mandatory Class I Federal areas.

The principal effect of these regulations will be to establish long-range goals, a planning process, and implementation procedures. Preliminary analyses have identified no existing sources which will need to install additional controls under these regulations. Some large new sources will be required to analyze their potential impact on visibility in mandatory Class I Federal areas; the State will retain final authority over construction permits for those sources.

Several changes have been made to the regulations as proposed on May 22, 1980. Included among the more significant changes are requirements giving States more authority over substantive decisions and provisions that the State may consider energy and economic impacts when evaluating sources which have visibility impacts on integral vistas of mandatory Class I Federal areas.

DATE: These rules are effective January 2, 1981. Petitions for review of these regulations must be filed in the United States Court of Appeals for the District of Columbia by February 2, 1981.

ADDRESS: Docket No. A-79-40, containing material relevant to this action, is located in West Tower Lobby, Gallery 1, U.S. Environmental Protection Agency, Central Docket Section, 401 M Street, S.W., Washington, D.C. 20460. The docket may be inspected between 8:00 a.m. and 4:00 p.m. on weekdays and a reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Mr. Johnnie L. Pearson, Office of Air Quality Planning and Standards (MD-15), Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Telephone: (919) 541-5497.

I. Background

A. The Statute

Section 169A of the Clean Air Act requires visibility protection for mandatory Class I Federal areas where it has been determined that visibility is an important value. "Mandatory Class I Federal areas" are all international parks and certain national parks and wilderness areas as described in Section 162(a) of the Clean Air Act (Act). To work toward meeting the national visibility goal set out in Section 169A(a)(1) of the prevention of any future and remedying of any existing man-made visibility impairment in such areas, Section 169A requires that the:

- Department of Interior review all mandatory Class I Federal areas and identify those where visibility is an important value [Section 169A(a)(2)].
- EPA, after consulting with the Department of Interior, promulgate a list of the mandatory Class I Federal areas in which visibility is an important value [Section 169A(a)(2)].
- EPA prepare a report to Congress on methods for achieving progress toward the visibility goal. The report must include methods to determine visibility impairment, modeling techniques, methods for preventing and remedying man-made air pollution and resulting visibility impairment, and a discussion of visibility related pollutants and sources [Section 169A(a)(3)].
- EPA promulgate regulations to assure reasonable progress toward the national visibility goal which will, among other things, (1) provide guidelines to States for including visibility protection in State Implementation Plans (SIPs); (2) require SIPs to include emission limits, schedules for compliance, and other measures as may be necessary to make reasonable progress toward meeting the national visibility goal; and (3) provide guidelines for determining emission limitations representing best available retrofit technology for fossil-fuel fired power plants in excess of 750 megawatts generating capacity [Section 169A(a)(4) and Section 169A(b)].
- EPA approve or disapprove SIP revisions submitted in response to the promulgated requirements [Section 110(a)(2)] and promulgate regulations for those States which submit inadequate regulations or fail to submit regulations in response to EPA's requirements [Section 110(c)].

In addition, Congress also included visibility protection requirements in the preconstruction review for prevention of significant deterioration (PSD) [Section 165] by:

- Giving Federal Land Managers "an affirmative responsibility" to protect the visibility values of a Federal Class I area and the right to recommend the denial of a PSD permit if an adverse impact on visibility would result, even if the Class I PSD increments would be met [Section 165(d)].

Requiring PSD permit applicants to analyze the visibility at the site of the proposed construction and any area potentially affected by the proposed construction [Section 165(e)].

B. Rulemaking

On November 30, 1979, the Agency published an Advance Notice of Proposed Rulemaking (ANPRM) (44 FR 69116), and also published its final determination under Section 169A(a)(2) of mandatory Class I Federal areas where visibility is an important value (44 FR 69122). The purpose of that ANPRM was to inform the public of the impending regulatory development effort and to solicit comment on various major issues needing resolution during regulatory development. EPA, on May 22, 1980 (45 FR 34762), published a Notice of Proposed Rulemaking (NPRM) and solicited comments on the regulatory approach presented. The Agency also announced two public hearings which were held in Washington, D.C., (June 30, 1980) and Salt Lake City, Utah, (July 2, 1980) for the purpose of receiving oral public comment on the proposed rules. The Agency subsequently announced (45 FR 49110, July 23, 1980) the availability of certain draft guideline documents, solicited comments on those guidelines, and established a public hearing for the purpose of obtaining oral public comment on these guidelines. This hearing was held on August 25, 1980 in Washington, D.C. On July 31, 1980 (45 FR 50825), EPA extended the public comment period on the regulations to August 22, 1980 in order to provide sufficient time for commenters to consider the guidelines and their effect on the proposed regulatory program. Transcripts of all public hearings and copies of the public comments received have been placed in Docket A-79-40. The Agency received a total of 383 comments from the public relating to the various aspects of the proposed programs. This promulgation is based upon the material in the docket including EPA's review and consideration of all comments received during the public comment period. Notice of the changes made from the proposal is in the "Supplemental

Statement of Basis and Purpose" which follows the regulatory language. Additionally, EPA has prepared a document, "Summary of Comments and Responses on the May 22, 1980 Proposed Regulations for Visibility Protection for Federal Class I Areas," which specifically responds to the comments received. This document has been placed in Docket A-79-40 and, depending upon available supplies, a copy may be obtained from: EPA Library (MD-35), U.S. Environmental Protection Agency, Research Triangle Park, N.C. 27711.

A copy of this document will be sent to all commenters on the ANPRM, NPRM, and guidelines.

C. Document Availability

The following documents were developed by EPA and should be of use to persons affected by today's promulgation. These documents are in Docket No. A-79-40 and are also available from the sources indicated below.

(1) "Protecting Visibility: An EPA Report to Congress" (EPA-450/5-79-008), National Technical Information Service, 5285 Port Royal Rd., Springfield, Virginia 22161.

(2) "The Development of Mathematical Models for the Prediction of Anthropogenic Visibility Impairment" (EPA-450/3-78-110 a, b, c), National Technical Information Service, 5285 Port Royal Rd., Springfield, Virginia 22161 (PB 293119, PB 293120, PB 293121).

(3) "Guidelines for Determining Best Available Retrofit Technology for Coal-Fired Power Plants and Other Existing Stationary Facilities," (EPA-450/3-80-009b), National Technical Information Service, 5285 Port Royal Rd., Springfield, Virginia 22161.

(4) "Assessment of Economic Impacts of Visibility Regulations," National Technical Information Service, 5285 Port Royal Rd., Springfield, Virginia 22161.

(5) "User's Manual for the Plume Visibility Model (PLUVUE)," (EPA 450/5-80-032) National Technical Information Service, 5285 Port Royal Rd., Springfield, Virginia 22161.

(6) "Workbook for Estimating Visibility Impairment," (EPA 450/4-80-031) National Technical Information Service, 5285 Port Royal Rd., Springfield, Virginia 22161.

(7) "Interim Guidance for Visibility Monitoring," (EPA 450/2-80-082) National Technical Information Service, 5285 Port Royal Rd., Springfield, Virginia 22161.

II. Program Overview

This preamble provides a brief description of the regulatory program, serving to introduce the specific regulatory language. Following the regulatory language is a "Supplemental Statement of Basis and Purpose" which discusses the major changes between the final and proposed rules. In addition, we have placed in Docket No. A-79-40 a document containing EPA's response to comments.

The Problem

Congress has set aside certain international parks and national wilderness areas, national memorial parks, and national parks (mandatory Class I Federal areas) to preserve and enhance their beauty for present and future generations to enjoy. The intrinsic beauty of these areas, however, has been threatened by visibility-degrading air pollution.[1] Visibility is commonly referred to as the relative ease with which objects can be seen through the atmosphere under various conditions. Congress became aware of the need to protect visibility in these areas and directed EPA through the Clean Air Act to explore the relationship between man-caused pollution and visibility impairment.

From this research we can say there are generally two types of air pollution which reduce or impair visibility:

(1) Smoke, dust, colored gas plumes, or layered haze emitted from stacks which obscure the sky or horizon and are relatable to a single source or a small group of sources, and (2) widespread, regionally homogeneous haze from a multitude of sources which impairs visibility in every direction over a large area.

These types of pollution are caused by factories, plants, and other sources that emit particles and gases into the air. These substances either absorb or scatter the light, thus reducing the amount of light a person can receive from a viewed object. The practical effect is that impaired visibility degrades the aesthetic value of surrounding landscape by (1) discoloring the atmosphere to produce a visible plume, (2) whitening the horizon and causing objects to appear flattened so that landscape colors and textures become less discernible, or (3) in the case of a discernible plume, obscuring some portion of the landscape.

[1] The National Parks and Conservation Association, in addition to many individual commenters, stated in comments on the proposed regulations for the protection of visibility that air pollution may well be the major threat to the national parks in the 1980's.

The Program

A Phased Approach to the Problem

Congress, in recognition of the need to protect the aesthetic value of visibility in national parks and wilderness areas, established a national visibility goal. The goal specifies that existing pollution be remedied and future pollution that would interfere with visibility in mandatory Class I Federal areas be prevented. We reviewed the techniques for identifying, measuring, predicting, and controlling visibility impairment, and in November 1979, published "Protecting Visibility: An EPA Report to Congress" which discusses in detail the present scientific knowledge of visibility, including monitoring, modeling, and control of visibility impairment.

As described in that report, we determined that the present mathematical models and monitoring techniques show promise for being used in a regulatory manner. However, these techniques must be further evaluated according to standard Agency procedures before we can routinely require their use in a regulatory program for sources, either new or existing, that may impair visibility. In some instances we can identify the origin of visibility impairment caused by a single source or small group of sources without the use of sophisticated analytical techniques. Simple monitoring techniques such as visual observation (either ground based or with aircraft) can often identify sources which contribute to the impairment.

Recognizing the need to initiate protection as soon as possible, while also realizing that certain scientific and technical limitations do exist, we are today promulgating, essentially as proposed, a phased approach to visibility protection. Representatives of industry, environmental groups, States, Federal Land Managers, and the public generally supported this phased approach to regulatory development.

Phase I of this program will:

1. Require control of impairment that can be traced to a single existing stationary facility or small group of existing stationary facilities,

2. Evaluate and control new sources to prevent future impairment, and

3. Require States to adopt strategies such as review and possible control of other existing sources not meeting the more stringent source-size requirements for existing stationary facilities in order to remedy existing and prevent future visibility impairment.

Information derived from modeling and monitoring can, in some cases, aid the States in development and

implementation of the visibility program. In the first phase, the States are required to consider available modeling and monitoring information. The use of such information will be at the discretion of the State, and the States are not required to establish monitoring networks or perform modeling analyses.

Future phases will extend the visibility program by addressing more complex problems such as regional haze and urban plumes. We will propose and promulgate future phases when improvement in monitoring techniques provides more data on source-specific levels of visibility impairment, regional scale models become refined, and our scientific knowledge about the relationships between emitted air pollutants and visibility impairment improves.

The Program—In Detail

We are promulgating regulations that require the 36 States containing mandatory Class I Federal areas to submit revisions to their SIPs within 9 months.[2] These regulations require that these States (1) revise their SIPs to assure reasonable progress toward the national visibility goal of preventing future and remedying existing impairment of visibility in mandatory Class I Federal areas, (2) determine whether certain existing stationary facilities should install the Best Available Retrofit Technology (BART) for controlling those pollutants which impair visibility (3) develop, adopt, implement, and evaluate long-term strategies for making reasonable progress toward remedying existing and preventing future impairment in the mandatory Class I Federal areas, and (4) adopt certain measures regarding visibility impacts that will supplement the State's new source review program.

The assistance of the Federal Land Managers, who are intimately familiar with the mandatory Class I Federal areas because of their responsibility for managing the areas, will be important to the State during development of a program to meet these requirements. Since coordination among the States, the Federal Land Managers, and EPA will be necessary to develop and implement an effective visibility protection program, we expect the State and the Federal Land Manager to work closely during the entire SIP development process. While the State retains the primary responsibility for developing an effective visibility program, the Federal Land Manager has the responsibility of characterizing the visibility of the mandatory Class I Federal areas. Therefore, the State should consider carefully the Federal Land Manager's comments and recommendations. These two must work together to ensure that visibility in these areas is protected. EPA's responsibility is to (1) promulgate visibility regulations which would require States to revise their State Implementation Plans (SIPs), (2) provide guidance to States for implementing the program (3) continue research into visibility for use in future phases, and (4) promulgate regulations for States which submit inadequate regulations or fail to submit regulations in response to these requirements.

Part of the participation process may involve the identification of integral vistas by the Federal Land Manager. An integral vista is an important view from a point in the mandatory Class I Federal area of a scenic landmark outside the boundary of the area. The vista must be important to the visitor's visual experience of the area. This identification must be in accordance with criteria formally adopted by the Federal Land Manager and must occur on or before December 31, 1985. The State is not required to analyze impairment of a vista if it determines that the Federal Land Manager's identification of the vista was not in accordance with these criteria.

Under the authority of § 169A, the regulations require the States to consider the potential of new or existing sources to impair visibility of an integral vista. This consideration may include the costs of compliance, the time necessary for compliance, the energy and nonair quality environmental impacts of compliance, the remaining useful life of the source, and the degree of improvement in visibility anticipated to result from control. A State, in its initial SIP revision, would have to consider an integral vista only if this vista was identified at least 6 months before plan submission or plan revision. With regard to permitting new sources, integral vistas identified at least 12 months before submission of a complete permit application would have to be protected unless the Federal Land Manager provided notice of and opportunity for public comment on the integral vista in which case the impact of the new source must be reviewed if the integral vista is identified at least 6 months before submission of the complete permit application. This requirement to protect integral vistas is part of the visibility protection program promulgated today and is not part of the PSD program.

EPA is currently reviewing new sources under the PSD provisions (40 CFR Part 52.21) for many States. New sources reviewed by EPA will be required under the authority of § 169A to assess their potential visibility impacts on integral vistas if identification of the integral vista meets the above criteria prior to the submission of a complete PSD permit application to EPA.

A. BART Requirements.

1. *The State or the Federal Land Manager determines whether, in any mandatory Class I Federal area, there exists any impairment of visibility.* This impairment must be identified at least 6 months prior to SIP submission (or submission of any SIP revision) in order to allow the State enough time to develop a plan to remedy the impairment. This provides the necessary "trigger" to inform the State if it needs to be concerned with any existing impairment, or if it needs to focus only on prevention of future impairment. We are defining "impairment" as any "humanly perceptible change in visibility (visual range, contrast, coloration) from that which would have existed under natural conditions." Impairment which is identified too late to be addressed by the initial plan revision will need to be addressed during the periodic review of the long-term strategy.

2. *The State will identify the existing stationary facilities which cause the visibility impairment.* Existing stationary facilities are certain sources which emit more that 250 tons per year, and (1) were not in operation prior to August 7, 1962, or (2) were reconstructed after that date. During Phase I of the visibility program, the State is required to determine if visibility impairment in any mandatory Class I Federal area "is reasonably attributable" to an existing stationary facility through visual observation or any other technique the State deems appropriate. The Federal Land Manager may provide the State with a list of sources suspected of causing or contributing to visibility impairment in the mandatory Class I Federal area.

3. *The State will perform a BART analysis on existing stationary facilities identified as impairing visibility.* In the BART analysis, the State identifies the pollutant of concern and what additional air pollution control technologies are to be required in order to reduce existing visibility impairment. We believe that while pollutants may

[2] We did not identify, nor did any commenters identify any State that did not contain a mandatory Class I Federal area, but which could contain a source the emissions from which could reasonably be anticipated to cause or contribute to any impairment of visibility in any mandatory Class I Federal area.

cause or contribute to visibility impairment, the pollutants of primary concern under this Phase I program are particulate matter and NO_x. Emissions of SO_2 primarily contribute to regional haze which is beyond the scope of this Phase I program. Therefore, we expect very few, if any, BART analyses for SO_2 in this phase of the program. It should, however, be noted that we expect that the Phase II program will result in control of pollutants associated with regional haze and urban plumes which affect mandatory Class I Federal areas. We therefore expect that sources would be analyzed, at that time, for all pollutants causing or contributing to these types of visibility impairment.

After the State identifies the source of the pollutant causing the visibility impairment, the State then identifies those control techniques that could improve visibility. If a control technique exists that would improve visibility in the mandatory Class I Federal area, then the State proceeds with the BART analysis, but if the most stringent control available would not result in any improvement in visibility, then the State may stop the analysis at this point. For example, while control techniques exist for NO_x, the reductions achievable by the best available technology, generally defined by current new source performance standards, may not be sufficient to achieve any perceptible improvement in visibility. In such cases the State is not obligated to require controls at this time.

If control techniques do exist that would improve visibility, the State begins studying alternative control strategies. The State should consider, on a case-by-case basis, how much various alternative control techniques would cost, the energy and environmental impact of the controls, what air pollution technologies the source already has in place, the remaining useful life of the source, and to what degree the control alternatives would improve visibility. In order to assist States in the analysis of BART, the Agency has developed "Guidelines for the Determination of Best Available Retrofit Technology for Coal-fired Power Plants and Other Existing Stationary Facilities." For large power plants, BART must be determined pursuant to this guideline.

The last stage of the BART analysis is for the State to specify an emission limitation that reflects BART. The source must then install, operate, and maintain the control technology to meet the emission limitation.

4. *The State must reanalyze ceretain existing stationary facilities that emit pollutants which were not controlled in a prior BART review.* This reanalysis would occur when the Administrator determines new technology is available which would more effectively control a pollutant which interferes with visibility. This reanalysis is only required where the imposition of controls representing BART have not been previously required for the specific pollutant. In this case, based upon the BART criteria, the State must require sources to install those controls called for by the analysis.

5. *The source may apply to the Administrator for on exemption from BART on the basis that the source does not cause or contribute to significant impairment of visibility.* The source must notify the Federal Land Manager of its application and must recieve written concurrence from the State on the application. To receive an exemption, the source must demonstrate to the Administrator that it does not cause or contribute to significant impairment of visibility.

By significant impairment we mean a level of impairment that interferes with the visitor's visual experience of the area. When applying for an exemption, a source should address the frequency, extent, time, intensity and duration of the impairment. If the Administrator grants an exemption, the Federal Land Manager must concur before the exemption will become effective.

B. Monitoring of Visibility Impacts

1. *The State will develop a monitoring strategy.* The State in developing this strategy would assess the need for visibility monitoring in the development and implementation of the State's visibility protection program taking into consideration available and forthcoming monitoring techniques, current research, and guidelines.

2. *The State will provide for consideration of monitoring requirements for new sources.* The State should assess on a case-by-case basis the need for monitoring by a source, as part of the new source review process, to provide information on any potential impacts on visibility in the Federal Class I area review process. This assessment will be based upon available data and the adequacy of available monitoring techniques.

3. *The State will evaluate any available monitoring data.* Any existing monitoring data available to the State should be incorporated into the State's decision-making process for BART determinations and new source review decisions.

C. Development of the Long-Term Strategy.

The regulations require each plan to include a long-term (10–15 year) strategy for making reasonable progress toward remedying existing and preventing future visibility impairment. The requirements are summarized below.

Remedying Existing Impairment

Some of the measures the State is to consider for remedying existing impairment are:

1. *Existing land management plans to protect or enhance visibility in the mandatory Class I Federal area and other plans relating to local use around the area that may affect visibility in these areas.* This will also be useful in developing the part of the long-term strategy relating to prevention of future impairment.

2. *The effectiveness of existing air pollution control programs in reducing visibility impairment.* For example, the attainment and maintenance of National Ambient Air Quality Standards may reduce or eliminate visibility impairmen in mandatory Class I Federal areas. If this is the case, the State should explain how this would contribute to reasonable progress.

3. *Additional emission limitations and schedules for compliance for uncontrolled or poorly controlled sources not covered by BART.* This recognizes that States may have to control sources not covered by BART to make reasonable progress toward the national goal.

4. *Retirement of existing sources and replacement with new, well controlled facilities.* The construction of new sources which will ensure the early or scheduled retirement of older, less well controlled sources can greatly aid progress toward the national visibility goal over the long term.

Preventing Future Impairment

The States must review all major stationary sources and major modifications as defined in EPA's Prevention of Significant Deterioration (PSD) regulations for their anticipated impacts on visibility in mandatory Class I Federal areas.

Under section 307, discussed below, and §§ 51.24 and 51.18 of EPA's existing PSD and new source regulations, a new major stationary sources must be reviewed for, among other things, its effect on visibility in Federal Class I areas. Thus, implementation of the PSD program will go a long way toward preventing future visibility impairment in mandatory Class I Federal areas.

There are, however, source which are not subject to the PSD rules because the PSD rules do not call for the review of a major stationary source locating in a "nonattainment" area, even if that source would impair visibility in a mandatory Class I Federal area. Today's action requires an analysis of visibility impacts by all new sources which might impair visibility in a mandatory Class I Federal area irrespective of their proposed location. However, unlike review under the PSD provisions, the State may, for these sources, consider cost, energy, and other relevant factors in determining whether to permit construction of the new source.

The State will review its strategy in consultation with the Federal Land Manager and report its findings to the public and the Administrator at least every three years. We believe that the periodic review of the long-term strategy is an important part of assuring reasonable progress toward the national visibility goal. Since the visibility program is new and evolving, a periodic review is necessary to 1) take into account advances in technology, 2) evaluate progress toward the goal, 3) evaluate specific program effectiveness, 4) consider any recently identified integral vista, and 5) provide a reassessment of the reasonableness of measures incorporated into the long-term strategy. In this review of the long-term strategy, the regulations would require certain analyses, including: (1) an assessment of the progress achieved in remedying existing impairment, (2) an assessment of the strategy's long-term ability to prevent future impairment, and (3) identification of advances in technology and consideration of additional measures that may be necessary to make reasonable progress toward the national goal. This periodic review will require an evaluation of available human observations, photo-documentation and monitoring data.

III. New Source Review Requirements for Visibility Impacts

EPA's PSD regulations require that a proposed major stationary source or major modification evaluate its potential impact on visibility and, if the source would cause an adverse impact on visibility in a Federal Class I area, that the State deny the permit. In this action we are promulgating a definition of "adverse impact" and clarifying certain procedural relationships between the Federal Land Manager and the State in the review of new source impacts on visibility in Federal Class I areas and integral vistas.

As the first step in the review process, the State notifies the Federal Land Manager of any potential new source that may impact visibility in a Federal Class I area. The State and Federal Land Manager then initiate consultation which will continue throughout the permitting process. Early consultation in the permitting process will be valuable and the State should notify the Federal Land Manager of the source that may potentially affect the Federal Class I area. This notification should take place at the time the State reasonably believes that a source intends to make an application for a permit that would affect the area. Under EPA's PSD regulations and § 165 of the Act, the Federal Land Manager may demonstrate to the State that the source will have an adverse impact on visibility in the Federal Class I area even where the PSD Class I air quality increments are not violated. If the State agrees with the Federal Land Manager's assessment that the source will "adversely impact" visibility in the Federal Class I area, then the State will deny the permit. If the State disagrees with the Federal Land Manager's demonstration, then it will provide a written explanation of its findings to be made available to the public prior to public hearings on the permit. Where disagreements on the permitting of a source exist between the State and the Federal Land Manager, the State may desire third-party input into the decision process. In such cases, the Administrator or appropriate Regional Administrator will be available to assist the State.

In addition, under authority of § 169A of the Act, Section 307 requires an analysis of the potential visibility impacts of new sources on integral vistas identified at least 12 months before submission of a complete permit application. However, if the Federal Land Manager provides an opportunity for public comment on the potential integral vista the analysis must include the impacts of any integral vista so identified at least 6 months prior to the submission of a complete permit application. This protection for integral vistas is governed not by the "adverse impact" test of § 165 and the PSD program, but rather by consideration of the long-term strategy of § 169A including cost, energy, and other relevant factors.

Finally, Section 307 allows the State to require the source to monitor visibility at the proposed site or potentially affected area as part of the PSD permit application.

IV. Regulatory Impact

The immediate, principal benefit of these regulations will be (1) the reduction or elimination of impacts reasonably attributable to specific existing sources, and (2) further definition of procedures for the review of new sources. The focus of these regulations will be principally in the West since western areas have generally good visibility now and are extremely sensitive to degradation. Also, the majority of the mandatory Class I Federal areas are located in the western United States. We recognize that States may permit construction of new sources which may result in visibility impairment of integral vistas if, in the State's judgment, such impairment is justified by the cost of additional controls, the time necessary to install controls, the energy and non-air quality environmental impacts of additional controls, and the useful life of the source.

The phased approach of these regulations will limit the amount of resources the States will have to expend on revising their SIPs. Preliminary indications are that few, if any, existing stationary facilities will have to retrofit controls. The one major requirement applicable to all 36 States is the development of a long-term strategy for making reasonable progress toward the national visibility goal. EPA believes, however, that many of the basic elements of an acceptable strategy already exist within the framework of other air pollution programs. Therefore, the State will need to examine the feasibility and efficacy of only a few other measures to determine if they should or need to be included in the long-term strategy.

The new source review program required by these regulations takes into account the new source review programs which the States are now called on to implement under the PSD and nonattainment provisions of the Clean Air Act.

As commenters, including major industry representatives, noted, it is impossible to prepare a precise regulatory analysis since the State has substantial discretion in developing a visibility protection program. However, since there will be individual cost considerations for any source which may be covered by the BART or reasonable progress requirements, no source is prejudiced by a less than perfect regulatory analysis now.

A. Existing Source Impacts

The Agency released for comment along with the proposed visibility regulations a draft analysis of the impact of these regulations on existing

sources. This analysis used visibility screening curves generated by a theoretical predictive model to identify existing stationary facilities which impair visibility in mandatory Class I Federal areas. The analysis identified a number of large power plants as potential BART candidates. In order to more realistically assess the impact of these regulations, EPA discussed with the Federal Land Managers the facilities identified in the initial screening process. We found that this initial screening overstated the potential impact of these regulations. Most of the sources which were initially identified as potential BART candidates are not now anticipated to be affected because the visibility impairment cannot be reasonably attributed to these facilities. Other sources identified in this analysis are not now believed to be affected by these regulations because either existing problems are currently being dealt with by other air quality programs or because currently available control techniques will not perceptibly improve visibility. The analysis also examined the possible economic impact on other existing stationary facilities and did not find any mandatory Class I Federal area in which visibility impairment might be reasonably attributable to any such source.

Since it is virtually impossible to perform an exhaustive analysis, there may yet be impairment of visibility in a mandatory Class I Federal area which we can reasonably attribute to an existing stationary facility.

As noted above, the State will need to examine the existing impairment in the mandatory Class I Federal areas and determine if BART is necessary for existing stationary facilities. There may also be sources which do not qualify as existing stationary facilities, but for which an impact on visibility is reasonably attributable. The need to make reasonable progress will require that the State examine these sources and determine what action, if any, is necessary to ensure progress toward the national visibility goal.

B. New Source Impacts

Most new sources that may impair visibility in the mandatory Class I Federal areas are currently subject to review under the PSD regulations. These visibility regulations would impose only a few additional procedural requirements and should therefore have little additional impact on these sources. The regulatory impact of the PSD program was addressed in that rulemaking.

These regulations do, however, ensure that certain sources exempt from the PSD regulations because of geographic criteria will be adequately reviewed for their potential impact on visibility in the mandatory Class I Federal area. Where a source could reduce visibility, several options are available to the State and the source. The State could (1) require the source to analyze alternative sites, (2) impose additional control requirements, (3) limit the source's capability to emit the pollutant which is expected to cause the impairment by limiting the source's operating conditions, or (4) deny the source permission to construct. Among the options available to the source are modifying its proposed operating conditions to reduce its potential impact and locating at other sites where the potential impact on the area is expected to be less.

While it is difficult to predict the overall marginal impact of these regulations on new sources, we can state those geographic areas where we would expect the major impact to occur. Large sources desiring to locate close to Federal Class I areas in the western U.S., particularly if they emit NO_x, may encounter difficulty due to the relative inability to control NO_x and because the visibility impact is frequently a coherent plume. In addition, dispersion conditions around many of these areas, primarily caused by their topography, will generally not enable emissions to disperse rapidly enough to prevent a coherent plume.

V. Judicial Review

Under Section 307(b)(1) of the Clean Air Act, judicial review of these regulations for the protection of visibility is available only by the filing of a petition for review in the United States Court of Appeals for the District of Columbia within 60 days of today. Under Section 307(b)(2) of the Clean Air Act the requirements which are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

These rules are issued under the authority granted in Sections 110, 114, 121, 160–169, 169A, and 301 of the Clean Air Act, 42 USC 7410, 7414, 7421, 7470–7479, 7491, and 7601.

Dated: November 21, 1980.

Douglas M. Costle,

Administrator.

The Administrator establishes a new Subpart P of Part 51, Title 40 of the Code of Federal Regulations to read as follows:

PART 51—REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS

Subpart P—Protection of Visibility

Sec.

Authority: Secs. 110, 114, 121, 160–169, 169A, and 301 of the Clean Air Act, (42 U.S.C. 7410, 7414, 7421, 7470–7479, and 7601)

§ 51.300 Purpose and applicability.

(a) *Purpose.* The primary purposes of this Subpart are (1) to require States to develop programs to assure reasonable progress toward meeting the national goal of preventing any future, and remedying and existing, impairment of visibility in mandatory Class I Federal areas which impairment results from man-made air pollution, and (2) to establish necessary additional procedures for new source permit applicants, States, and Federal Land Managers to use in conducting the visibility impact analysis required for new sources under § 51.24.

(b) *Applicability.* (1) The provisions of this Subpart are applicable to: (i) each State which has a mandatory Class I Federal area identified in Part 81, Subpart D, of this title, and (ii) each State in which there is any source the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area. (2) The provisions of this Subpart are applicable to the following States:

(i) Alabama
(ii) Alaska
(iii) Arizona
(iv) Arkansas
(v) California
(vi) Colorado
(vii) Florida
(viii) Georgia
(ix) Hawaii
(x) Idaho
(xi) Kentucky
(xii) Louisiana
(xiii) Maine
(xiv) Michigan
(xv) Minnesota
(xvi) Missouri
(xvii) Montana
(xviii) Nevada
(xix) New Hampshire
(xx) New Jersey
(xxi) New Mexico
(xxii) North Carolina
(xxiii) North Dakota
(xxiv) Oklahoma

(xxv) Oregon
(xxvi) South Carolina
(xxvii) South Dakota
(xxviii) Tennessee
(xxix) Texas
(xxx) Utah
(xxxi) Vermont
(xxxii) Virginia
(xxxiii) Virgin Islands
(xxxiv) Washington
(xxxv) West Virginia
(xxxvi) Wyoming.

§ 51.301 Definitions.

For purposes of this Subpart:

(a) "Adverse impact on visibility" means, for purposes of § 307, 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 impairments, 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. This term does not include effects on integral vistas.

(b) "Agency" means the U.S. Environmental Protection Agency.

(c) "Best Available Retrofit Technology (BART)" means an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by an existing stationary facility. The emission limitation must be established, on a case-by-case basis, taking into consideration the technology available, the costs of compliance, the energy and nonair quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

(d) "Building, structure, or facility" 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). Pollutant-emitting activities must 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).

(e) "Existing Stationary Facility" means any of the following stationary sources of air pollutants, including any reconstructed source, which was not in operation prior to August 7, 1962, and was in existence on August 7, 1977, and has the potential to emit 250 tons per year or more of any air pollutant. In determining potential to emit, fugitive emissions, to the extent quantifiable, must be counted.

(1) Fossil-fuel fired steam electric plants of more than 250 million British thermal units per hour heat input,
(2) Coal cleaning plants (thermal dryers),
(3) Kraft pulp mills,
(4) Portland cement plants,
(5) Primary zinc smelters,
(6) Iron and steel mill plants,
(7) Primary aluminum ore reduction plants,
(8) Primary copper smelters,
(9) Municipal incinerators capable of charging more than 250 tons of refuse per day,
(10) Hydrofluoric, sulfuric, and nitric acid plants,
(11) Petroleum refineries,
(12) Lime plants,
(13) Phosphate rock processing plants,
(14) Coke oven batteries,
(15) Sulfur recovery plants,
(16) Carbon black plants (furnace process),
(17) Primary lead smelters,
(18) Fuel conversion plants,
(19) Sintering plants,
(20) Secondary metal production facilities,
(21) Chemical process plants,
(22) Fossil-fuel boilers of more than 250 million British thermal units per hour heat input,
(23) Petroleum storage and transfer facilities with a capacity exceeding 300,000 barrels,
(24) Taconite ore processing facilities,
(25) Glass fiber processing plants, and
(26) Charcoal production facilities.

(f) "Federal Class I area" means any Federal land that is classified or reclassified "Class I."

(g) "Federal Land Manager" means the Secretary of the department with authority over the Federal Class I area or, with respect to Roosevelt-Campobello International Park, the Chairman of the Roosevelt-Campobello International Park Commission.

(h) "Federally enforceable" means all limitations and conditions which are enforceable by the Administrator under the Clean Air Act including those requirements developed pursuant to Parts 60 and 61 of this title, requirements within any applicable State Implementation Plan, and any permit requirements established pursuant to § 52.21 of this Chapter or under regulations approved pursuant to § 51, § 52, or § 60 of this title.

(i) "Fixed capital cost" means the capital needed to provide all of the depreciable components.

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

(k) "In existence" means that the owner or operator has obtained all necessary preconstruction approvals or permits required by Federal, State, or local air pollution emissions and air quality laws or regulations and either has (1) begun, or caused to begin, a continuous program of physical on-site construction of the facility or (2) 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 construction of the facility to be completed in a reasonable time.

(l) "Installation" means an identifiable piece of process equipment.

(m) "In operation" means engaged in activity related to the primary design function of the source.

(n) "Integral vista" means a view perceived from within the mandatory Class I Federal area of a specific landmark or panorama located outside the boundary of the mandatory Class I Federal area.

(o) "Mandatory Class I Federal Area" means any area identified in Part 81, Subpart D of this title.

(p) "Major Stationary Source" and "major modification" mean "major stationary source" and "major modification," respectively, as defined in § 51.24.

(q) "Natural Conditions" includes naturally occurring phenomena that reduce visibility as measured in terms of visual range, contrast, or coloration.

(r) "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.

(s) "Reasonably attributable" means attributable by visual observation or

any other technique the State deems appropriate.

(t) "Reconstruction" will be presumed to have taken place where the fixed capital cost of the new component exceeds 50 percent of the fixed capital cost of a comparable entirely new source. Any final decision as to whether reconstruction has occurred must be made in accordance with the provisions of § 60.15 (f) (1)–(3) of this title.

(u) "Secondary emissions" means emissions which occur as a result of the construction or operation of an existing stationary facility but do not come from the existing stationary facility. Secondary emissions may include, but are not limited to, emissions from ships or trains coming to or from the existing stationary facility.

(v) "Significant impairment" means, for purposes of § 303, visibility impairment which, in the judgment of the Administrator, interferes with the management, protection, preservation, or enjoyment of the visitor's visual experience of the mandatory Class I Federal area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency and time of the visibility impairment, and how these factors correlate with (1) times of visitor use of the mandatory Class I Federal area, and (2) the frequency and timing of natural conditions that reduce visibility.

(w) "Stationary Source" means any building, structure, facility, or installation which emits or may emit any air pollutant.

(x) "Visibility impairment" means any humanly perceptible change in visibility (visual range, contrast, coloration) from that which would have existed under natural conditions.

(y) "Visibility in any mandatory Class I Federal area" includes any integral vista associated with that area.

§ 51.302 Implementation control strategies.

(a) *Plan Revision Procedures.*

(1) Each State identified in § 300(b)(2) must submit, no later than nine months from the date of promulgation of this regulation, an implementation plan revision meeting the requirements of this Subpart.

(2)(i) The State, prior to adoption of any implementation plan required by this Subpart, must conduct one or more public hearings on such plan in accordance with § 51.4.

(ii) In addition to the requirements in § 51.4, the State must provide written notification of such hearings to each affected Federal Land Manager, and other affected States, and must state where the public can inspect a summary prepared by the Federal Land Managers of their conclusions and recommendations, if any, on the proposed plan.

(3) Submission of plans as required by this Subpart must be conducted in accordance with the procedures in § 51.5.

(b) *State and Federal Land Manager Coordination.*

(1) The State must identify to the Federal Land Managers, in writing and within 30 days of the date of promulgation of these regulations, the title of the official to which the Federal Land Manager of any mandatory Class I Federal area can submit a recommendation on the implementation of this Subpart including, but not limited to:

(i) A list of integral vistas that are to be listed by the State for the purpose of implementing § 304,

(ii) Identification of impairment of visibility in any mandatory Class I Federal area(s), and

(iii) Identification of elements for inclusion in the visibility monitoring strategy required by § 305.

(2) The State must provide opportunity for consultation, in person and at least 60 days prior to holding any public hearing on the plan, with the Federal Land Manager on the proposed SIP revision required by this Subpart. This consultation must include the opportunity for the affected Federal Land Managers to discuss their:

(i) Assessment of impairment of visibility in any mandatory Class I Federal area, and

(ii) Recommendations on the development of the long-term strategy.

(3) The plan must provide procedures for continuing consultation between the State and Federal Land Manager on the implementation of the visibility protection program required by this Subpart.

(c) *General Plan Requirements.*

(1) The affected Federal Land Manager may certify to the State, at any time, that there exists impairment of visibility in any mandatory Class I Federal area.

(2) The plan must contain:

(i) A long-term (10–15 years) strategy, as specified in § 305 and § 306, including such emission limitations, schedules of compliance, and such other measures including schedules for the implementation of the elements of the long-term strategy as may be necessary to make reasonable progress toward the national goal specified in § 300(a).

(ii) An assessment of visibility impairment and a discussion of how each element of the plan relates to the prevention of future or remedying of existing impairment of visibility in any mandatory Class I Federal area within the State.

(iii) Emission limitations representing BART and schedules for compliance with BART for each existing stationary facility identified according to paragraph (c)(4) of this section.

(3) The plan must require each source to maintain control equipment required by this Subpart and establish procedures to ensure such control equipment is properly operated and maintained.

(4) For any existing visibility impairment the Federal Land Manager certifies to the State under paragraph (c)(1) at least 6 months prior to plan submission:

(i) The State must identify and analyze for BART each existing stationary facility which may reasonably be anticipated to cause or contribute to impairment of visibility in any mandatory Class I Federal area where the impairment in the mandatory Class I Federal area is reasonably attributable to that existing stationary facility. The State need not consider any integral vista the Federal Land Manager did not identify pursuant to § 304(b) at least 6 months before plan submission.

(ii) If the State determines that technological or economic limitations on the applicability of measurement methodology to a particular existing stationary facility would make the imposition of an emission standard infeasible it may instead prescribe a design, equipment, work practice, or other operational standard, or combination thereof, to require the application of BART. Such standard, to the degree possible, is to set forth the emission reduction to be achieved by implementation of such design, equipment, work practice or operation, and must provide for compliance by means which achieve equivalent results.

(iii) BART must be determined for fossil-fuel fired generating plants having a total generating capacity in excess of 750 megawatts pursuant to "Guidelines for Determining Best Available Retrofit Technology for Coal-fired Power Plants and Other Existing Stationary Facilities" (1980), which is incorporated by reference, exclusive of Appendix E, which was published in the **Federal Register** on February 6, 1980 (45 FR 8210). It is EPA publication No. 450/3–80–009b and is for sale from the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161. It is also available for inspection at the office of the Federal Register

Information Center, Room 8301, 1100 I Street, NW, Washington, D.C. 20408.

This incorporation by reference was approved by the Director of the Federal Register. These materials are incorporated as they exist on the date of approval and a notice of any change will be published in the Federal Register.

(iv) The plan must require that each existing stationary facility required to install and operate BART do so as expeditiously as practicable but in no case later than five years after plan approval.

(v) The plan must provide for a BART analysis of any existing stationary facility that might cause or contribute to impairment of visibility in any mandatory Class I Federal area identified under this paragraph (4) at such times, as determined by the Administrator, as new technology for control of the pollutant becomes reasonably available if:

(A) The pollutant is emitted by that existing stationary facility,

(B) Controls representing BART for the pollutant have not previously been required under this Subpart, and

(C) The impairment of visibility in any mandatory Class I Federal area is reasonably attributable to the emissions of that pollutant.

§ 51.303 Exemptions from control.

(a)(1) Any existing stationary facility subject to the requirement under § 302 to install, operate, and maintain BART may apply to the Administrator for an exemption from that requirement.

(2) An application under this section must include all available documentation relevant to the impact of the source's emissions on visibility in any mandatory Class I Federal area and a demonstration by the existing stationary facility that it does not or will not, by itself or in combination with other sources, emit any air pollutant which may be reasonably anticipated to cause or contribute to a significant impairment of visibility in any mandatory Class I Federal area.

(b) Any fossil-fuel fired power plant with a total generating capacity of 750 megawatts or more may receive an exemption from BART only if the owner or operator of such power plant demonstrates to the satisfaction of the Administrator that such power plant is located at such a distance from all mandatory Class I Federal areas that such power plant does not or will not, by itself or in combination with other sources, emit any air pollutant which may reasonably be anticipated to cause or contribute to significant impairment of visibility in any such mandatory Class I Federal area.

(c) Application under this § 303 must be accompanied by a written concurrence from the State with regulatory authority over the source.

(d) The existing stationary facility must give prior written notice to all affected Federal Land Managers of any application for exemption under this § 303.

(e) The Federal Land Manager may provide an initial recommendation or comment on the disposition of such application. Such recommendation, where provided, must be part of the exemption application. This recommendation is not to be construed as the concurrence required under Paragraph (b) below.

(f) The Administrator, within 90 days of receipt of an application for exemption from control, will provide notice of receipt of an exemption application and notice of opportunity for public hearing on the application.

(g) After notice and opportunity for public hearing, the Administrator may grant or deny the exemption. For purposes of judicial review, final EPA action on an application for an exemption under this § 303 will not occur until EPA approves or disapproves the State Implementation Plan revision.

(h) An exemption granted by the Administrator under this § 303 will be effective only upon concurrence by all affected Federal Land Managers with the Administrator's determination.

§ 51.304 Identification of integral vistas.

(a) On or before December 31, 1985 the Federal Land Manager may identify any integral vista. The integral vista must be identified according to criteria the Federal Land Manager develops. These criteria must include, but are not limited to, whether the integral vista is important to the visitor's visual experience of the mandatory Class I Federal area. Adoption of criteria must be preceded by reasonable notice and opportunity for public comment on the proposed criteria.

(b) The Federal Land Manager must notify the State of any integral vistas identified under Paragraph (a) and the reasons therefor.

(c) The State must list in its implementation plan any integral vista the Federal Land Manager identifies at least six months prior to plan submission, and must list in its implementation plan at its earliest opportunity, and in no case later than at the time of the periodic review of the SIP required by § 306(c), any integral vista the Federal Land Manager identifies after that time.

(d) The State need not in its implementation plan list any integral vista the indentification of which was not made in accordance with the criteria in Paragraph (a). In making this finding, the State must carefully consider the expertise of the Federal Land Manager in making the judgments called for by the criteria for identification. Where the State and the Federal Land Manager disagree on the identification of any integral vista, the State must give the Federal Land Manager an opportunity to consult with the Governor of the State.

§ 51.305 Monitoring.

(a) The State must include in the plan a strategy for evaluating visibility in any mandatory Class I Federal area by visual observation or other appropriate monitoring techniques. Such strategy must take into account current and anticipated visibility monitoring research, the availability of appropriate monitoring techniques, and such guidance as is provided by the Agency.

(b) The plan must provide for the consideration of available visibility data and must provide a mechanism for its use in decisions required by this Subpart.

§ 51.306 Long-term strategy.

(a)(1) Each plan must include a long-term (10–15 years) strategy for making reasonable progress toward the national goal specified in § 300(a). This strategy must cover any existing impairment the Federal Land Manager certifies to the State at least 6 months prior to plan submission, and any integral vista of which the Federal Land Manager notifies the State at least 6 months prior to plan submission.

(2) A long-term strategy must be developed for each mandatory Class I Federal area located within the State and each mandatory Class I Federal area located outside the State which may be affected by sources within the State. This does not preclude the development of a single comprehensive plan for all such areas.

(3) The plan must set forth with reasonable specificity why the long-term strategy is adequate for making reasonable progress toward the national visibility goal, including remedying existing and preventing future impairment.

(b) The State must coordinate its long-term strategy for an area with existing plans and goals, including those provided by the affected Federal Land Managers, that may affect impairment of visibility in any mandatory Class I Federal area.

(c) The plan must provide for periodic review and revision, as appropriate, of the long-term strategy not less frequent than every three years. This review

process must include consultation with the appropriate Federal Land Managers, and the State must provide a report to the public and the Administrator on progress toward the national goal. This report must include an assessment of:

(1) The progress achieved in remedying existing impairment of visibility in any mandatory Class I Federal area;

(2) The ability of the long-term strategy to prevent future impairment of visibility in any mandatory Class I Federal area;

(3) Any change in visibility since the last such report, or, in the case of the first report, since plan approval;

(4) Additional measures, including the need for SIP revisions, that may be necessary to assure reasonable progress toward the national visibility goal;

(5) The progress achieved in implementing BART and meeting other schedules set forth in the long-term strategy;

(6) The impact of any exemption granted under § 303;

(7) The need for BART to remedy existing visibility impairment of any integral vista listed in the plan since the last such report, or, in the case of the first report, since plan approval.

(d) The long-term strategy must provide for review of the impacts from any new major stationary source or major modifications on visibility in any mandatory Class I Federal area. This review of major stationary sources or major modifications must be in accordance with § 307, § 51.24, § 51.18 and any other binding guidance provided by the Agency insofar as these provisions pertain to protection of visibility in any mandatory Class I Federal areas.

(e) The State must consider, at a minimum, the following factors during the development of its long-term strategy:

(1) Emission reductions due to ongoing air pollution control programs,

(2) Additional emission limitations and schedules for compliance,

(3) Measures to mitigate the impacts of construction activities,

(4) Source retirement and replacement schedules,

(5) Smoke management techniques for agricultural and forestry management purposes including such plans as currently exist within the State for these purposes, and

(6) Enforceability of emission limitations and control measures.

(f) The plan must discuss the reasons why the above and other reasonable measures considered in the development of the long-term strategy were or were not adopted as part of the long-term strategy.

(g) The State, in developing the long-term strategy, must take into account the effect of new sources, and the costs of compliance, the time necessary for compliance, the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any affected existing source and equipment therein.

§ 51.307 New source review.

(a) For purposes of new source review of any new major stationary source or major modification that would be constructed in an area that is designated attainment or unclassified under Section 107(d)(1)(D) or (E) of the Clean Air Act, the State plan must, in any review under § 51.24 with respect to visibility protection and analyses, provide for:

(1) Written notification of all affected Federal Land Managers of any proposed new major stationary source or major modification that may affect visibility in any Federal Class I area. Such notification must be made in writing and include a copy of all information relevant to the permit application within 30 days of receipt of and at least 60 days prior to public hearing by the State on the application for permit to construct. Such notification must include an analysis of the anticipated impacts on visibility in any Federal Class I area,

(2) Where the State requires or receives advance notification (e.g. early consultation with the source prior to submission of the application or notification of intent to monitor under § 51.24) of a permit application of a source that may affect visibility the State must notify all affected Federal Land Managers within 30 days of such advance notification, and

(3) Consideration of any analysis performed by the Federal Land Manager, provided within 30 days of the notification and analysis required by Paragraph (a)(1) above, that such proposed new major stationary source or major modification may have an adverse impact on visibility in any Federal Class I area. Where the State finds that such an analysis does not demonstrate to the satisfaction of the State that an adverse impact will result in the Federal Class I area, the State must, in the notice of public hearing, either explain its decision or give notice as to where the explanation can be obtained.

(b) The plan shall also provide for the review of any new major stationary source or major modification:

(1) That may have an impact on any integral vista of a mandatory Class I Federal area, if it is identified in accordance with § 304 by the Federal Land Manager at least 12 months before submission of a complete permit application, except where the Federal Land Manager has provided notice and opportunity for public comment on the integral vista in which case the review must include impacts on any integral vista identified at least 6 months prior to submission of a complete permit application, unless the State determines under § 304(d) that the identification was not in accordance with the identification criteria, or

(2) That proposes to locate in an area classified as nonattainment under section 107(d)(1)(A), (B), or (C) of the Clean Air Act that may have an impact on visibility in any mandatory Class I Federal area.

(c) Review of any major stationary source or major modification under Paragraph (b) shall be conducted in accordance with Paragraph (a) above, and § 51.24(o), (p) (1)-(2), and (q). In conducting such reviews the State must ensure that the source's emissions will be consistent with making reasonable progress toward the national visibility goal referred to in § 300(a). The State may take into account the costs of compliance, the time necessary for compliance, the energy and nonair quality environmental impacts of compliance, and the useful life of the source.

(d) The State may require monitoring of visibility in any Federal Class I area near the proposed new stationary source or major modification for such purposes and by such means as the State deems necessary and appropriate.

Supplemental Statement of Basis and Purpose [1]

This statement sets out briefly the changes in the final rules from the proposal, the reasons for those changes, and significant comments related to these changes. A complete response to all comments received can be found in "Summary of Comments and Responses on the May 22, 1980 Proposed Regulations on Visibility Protection for Federal Class I Areas" available in Docket A-79-40.

Comments were received from private industry, private individuals, environmental organizations, local government, State and local air pollution control agencies, and other Federal agencies, and addressed nearly every aspect of the proposal. In developing these final rules, the Administrator considered all public comments received, and believes that the final

[1] This statement will not appear in the Code of Federal Regulations.

rules represent, as a consequence, an improvement upon the proposal. Today's promulgation is the best program that can be established considering the scientific and technical limitations that exist in measuring and predicting visibility impairment.

This supplemental statement notes the regulatory changes in each Section so the reader can determine them easily.

§ 300 Purpose and Applicability

This Section remains essentially as proposed. The major changes were: (1) Paragraph (a)(1)(iii) was made Paragraph (b)(3) for clarity; and (2) the portion of Paragraph (b)(2) which described procedures for changing the list of affected States was deleted because the Administrator has determined it would be appropriate to propose and solicit comment before promulgating any change in the States affected by these rules.

§ 301 Definitions

This Section now lists the definitions alphabetically for ease of reader reference. The following definitions were changed:

(1) Adverse impact—The phrase "of the visitor's visual experience" was added to the first sentence of the definition to clarify that, for purposes of this definition, "management, protection, and preservation" concerns are important only as they relate to the visitor's visual experience of the Federal Class I area. Additionally, a statement was added to indicate that the "adverse impact" test for a new source under the PSD program does not apply to integral vistas.

(2) Best available retrofit technology—The phrase "or in existence" was added to the requirement that the State consider "pollution control equipment in use" in determining BART. This change was made because the Administrator believes that where a source is installing controls as a result of other air pollution control programs that are not yet "in use," these controls and anticipated effects should be taken into account in the BART determinations.

(3) Building, structure, facility—This definition was changed to be consistent with the PSD regulations (45 FR 52676, August 7, 1980) ("new PSD regulations").

(4) Existing stationary facility—This term was changed from "existing major stationary source" to reduce any confusion with other definitions of "source" in 40 CFR Part 51. Additionally, as many commenters urged, EPA has harmonized with Section 169A(g)(7) of the Act the proposed provision restricting pollutants to be considered to those regulated under the Act.

(5) Federal Class I area and mandatory Class I Federal area—These definitions were added to clarify the difference between them.

(6) Federally enforceable—This definition was added to be consistent with the new PSD regulations.

(7) Fugitive emissions—This definition was changed consistent with the new PSD regulations.

(8) Installation—This definition was separated from "building, structure, or facility" to accommodate the reconstruction provisions of BART applicability, and to be consistent with the nonattainment regulations (45 FR 52676, August 7, 1980 ("new nonattainment regulations").

(9) Integral vista—This definition was changed to be consistent with changes in § 304. (See discussion on § 304, and on definition of "visibility in any mandatory Class I Federal area.")

(10) Major stationary source—The term "major emitting facility" was replaced by major stationary source to be consistent with other provisions of 40 CFR Part 51.

(11) Natural conditions—This definition was changed in response to public comments stating that the proposed definition was vague and unworkable. The definition now states that natural conditions are naturally occurring phenomena and defines the terms in which it is to be measured.

(12) Potential to emit—This definition was changed to be consistent with the new PSD regulations. The fugitive emissions inclusion statement was moved to the definition of "existing stationary facility."

(13) Reasonably attributable—This definition was changed for clarity and in response to comments that EPA should not require a State to attribute impairment solely on the basis of a monitoring technique other than visual observation. The definition now states that impairment is attributable by visual observation, and that the State in its discretion may use any other appropriate technique to attribute impairment.

(14) Reconstruction—The reference to "reconstruction" in the definition of "existing stationary facility" was changed slightly for clarification.

(15) Secondary emissions—This definition was changed to be consistent with the new PSD regulations.

(16) Significant impairment—This definition was changed in the same manner as the definition of adverse impact. The exemption procedures for sources not causing or contributing to significant impairment applies to impairment of an integral vista (see § 303).

(17) Stationary source—This definition was changed in response to comments that Section 169A(a)(7) applies to "any" pollutant, not just those "regulated under the Act."

(18) Visibility in any mandatory Class I Federal area—This definition was added because integral vistas are part of the mandatory Class I Federal area.

§ 302 Implementation Control Strategies

(1) While the basic structure of this Section remains the same, due to the various changes in this Section, paragraphs have been renumbered.

(2) Paragraph (b) was rewritten to clarify the role of the Federal Land Manager in the SIP development process.

(3) Paragraph (c)(2) was deleted because the integral vista identification procedures are all included in § 304 for clarity.

(4) Paragraph (c)(4) was rewritten to clarify the BART determination process, including the Federal Land Manager's role in the process, and to ensure existing stationary facilities are analyzed for their effect on integral vistas. Also, the BART reanalysis procedures have been moved to this paragraph from the section on long-term strategy.

Specifically, the State must determine whether any impairment the Federal Land Manager identifies at least 6 months before plan submission is reasonably attributable to any specific existing stationary facility. The State will subsequently establish the BART emission limitation for such sources based upon the BART guidelines. This BART emission limitation will, of course, be reviewable by the Administrator during the SIP review process.

When the Administrator determines that new technology is available for the control of a pollutant *not* previously controlled under BART requirements, he will so advise the States, provide guidance on the application of the new control technique for sources emitting that pollutant and call on the States to revise the SIPs accordingly. This is narrower than the reanalysis requirement proposed, as explained in the Response to Comment document.

§ 303 Exemptions from Control

Paragraph (c) has been rewritten to indicate that concurrence on the exemption application is needed only from the State with regulatory authority over the source. Several commenters were confused by this provision because they believed any concurrence would be an admission by the State that it had

performed the BART analysis improperly. To the contrary, the exemption process is not related to the establishment of the BART emission limitation. BART emission limitations are to be set for sources which cause or contribute to *any* visibility impairment, which is reasonably attributable to the source, whereas the source may apply for an exemption on the basis that it does not cause or contribute to *significant* impairment of visibility. The State's concurrence is required on any such application for an exemption because, under Section 116 of the Act, the State may establish emission limitations more stringent than required by the Administrator. The Administrator does not intend that this exemption procedure usurp any right by the State to establish emission limitations and therefore will not grant any exemption in which the State does not concur.

§ 304 Identification of Integral Vistas

This Section has been entirely revised in response to public comments. Under these final rules, if the Federal Land Manager desires to identify integral vistas (the Federal Land Manager is not required to do so), the Federal Land Manager must first adopt specific identification criteria preceded by notice and a reasonable opportunity for public comment. If the Federal Land Manager desires visibility protection for an integral vista, the vista must be identified to the State, which will then list the integral vista in the SIP. The Federal Land Managers may, at their discretion, subject the integral vistas to public comment prior to identification to the State. The State need not list any integral vista that it determines was not identified in accordance with the criteria. Where the State disagrees with the Federal Land Manager over an integral vista, the State must provide opportunity for the Federal Land Manager to discuss the identification with the Governor of the State. It is important to note that a State may, under its own authority, identify additional integral vistas to be afforded visibility protection.

§ 305 Monitoring

The requirement for consultation with the Federal Land Manager has been deleted as duplicative of § 302(b)(1)(iii).

§ 306 Long-term Strategy

(1) Paragraph (a)(1) has been revised to indicate that the long-term strategy must cover any existing impairment, including impairment of integral vistas, identified by the Federal Land Manager at least 6 months prior to plan submission.

(2) Paragraph (a)(2) has been revised to clarify that only mandatory Class I Federal areas that may be impacted by sources in the State need be addressed. Additionally, a statement was added to permit the State to develop a single comprehensive plan for visibility protection instead of developing fragmented plans for each area.

(3) Paragraph (b) has been rewritten to ensure consideration of all plans that might affect visibility in the mandatory Class I Federal area, so that the State can coordinate its long-term strategy with them.

(4) Paragraph (d)(2) is revised to refer to the new source programs of § 307, § 51.24(PSD), and § 51.18 (nonattainment new source review). The purpose of this reference is not to add new requirements, but simply to make note of these existing requirements. It is anticipated that States will have already adopted programs consistent with § 51.18 and § 51.24.

(5) Paragraph (e) of the proposed rule requiring BART reanalysis was moved to the paragraph on BART procedures.

(6) Paragraph (f)(5) [proposed paragraph (e)(5)] has been revised to ensure adequate consideration of existing plans for the use and control of prescribed forest and agricultural burning.

(7) Proposed Paragraph (h) is deleted as the requirement is included in § 302(c)(2)(i).

§ 307 New Source Review

(1) This section has been substantially changed to make it clearer and simpler. Paragraph (a) has been changed to ensure notification of all affected Federal Land Managers at least 60 days (instead of the proposed 30 days) before the public hearing on the construction permit of any source subject to the PSD provisions that may affect visibility. This ensures that the Federal Land Manager will have adequate time before the public hearing to assess the source's potential impact. In addition, Paragraph (a) ensures that the public has access before the hearing to the State's reasons for not being satisified with any demonstration by the Federal Land Manager that an adverse impact on visibility would result. This will aid the public's ability to comment meaningfully at the hearing.

(2) Paragraph (b) requires that the review of any new major stationary source or major modifications must cover any integral vista identified at least 12 months before submission of a complete permit application unless the Federal Land Manager identifies the vista after notice and opportunity for public comment on the integral vista in which case the review must include any integral vista identified at least 6 months prior to submission of the complete permit application. Review of such vistas is governed by the requirement for making reasonable progress towards the national visibility goal. The Agency recognizes that there may be situations where, in considering the factors of reasonable progress as set out in § 169A(g)(1), some additional visibility impairment should be tolerated or accepted. The State may allow the visibility impairment recognizing it to be interim in nature such as natural resource extraction, or the State may permit a source which will impair visibility now while acknowledging there may be the opportunity in the future to remedy that impairment (as with emissions of NO_x). Provisions for future considerations of improved controls may be incorporated as a condition of a new source permit. This may be consistent with the intent of reasonable progress. The national goal was not to be achieved immediately: energy, economic, and other factors should be considered; therefore, some visibility impairment in these situations could be tolerated.

(3) The requirement in Paragraph (d) is unchanged.

(4) All other provisions of proposed Section 307 have been deleted because they merely repeat requirements of §51.24.

[FR Doc. 80-37533 Filed 12-1-80; 8:45 am]

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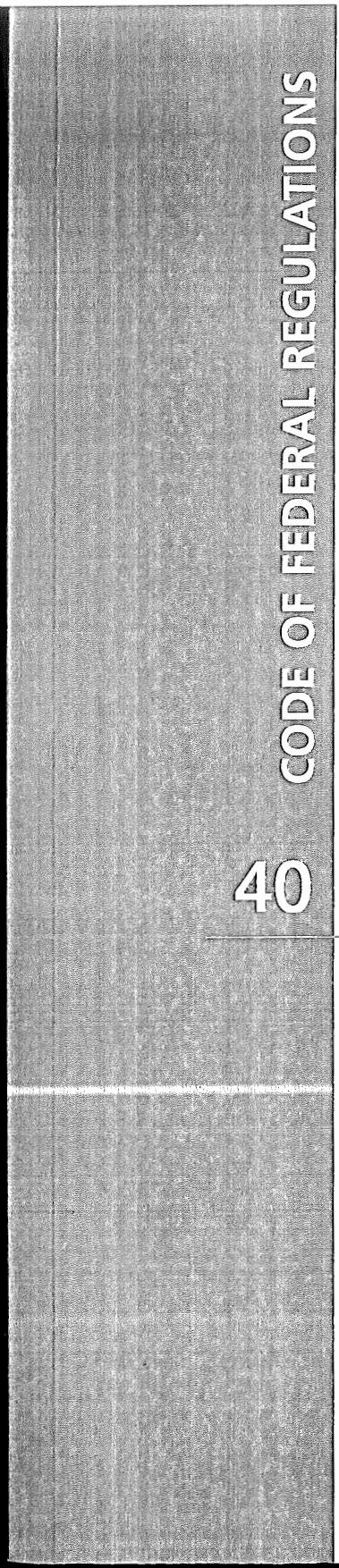

CFR

Protection of Environment

Parts 50 to 51

Revised as of July 1, 2017

OFFICE OF THE FEDERAL REGISTER

As shown in Example 2, this site fails to meet the primary and secondary O_3 NAAQS because the 3-year average of the annual fourth-highest daily maximum 8-hour average O_3 concentrations (*i.e.*, 0.073333 ppm, truncated to 0.073 ppm) is greater than 0.070 ppm, even though the annual data completeness is less than 75% in one year and the 3-year average data completeness is less than 90% (*i.e.*, design value would not otherwise be considered valid).

[80 FR 65468, Oct. 26, 2015]

PART 51—REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS

Subpart A—Air Emissions Reporting Requirements

GENERAL INFORMATION FOR INVENTORY PREPARERS

Sec.

SPECIFIC REPORTING REQUIREMENTS

Subparts B–E [Reserved]

Subpart F—Procedural Requirements

Subpart G—Control Strategy

Subpart H—Prevention of Air Pollution Emergency Episodes

Subpart I—Review of New Sources and Modifications

Subpart J—Ambient Air Quality Surveillance

the plan during the 5-year period following its submission. The description must include projections of the extent to which resources will be acquired at 1-, 3-, and 5-year intervals.

[51 FR 40674, Nov. 7, 1986]

§ 51.281 Copies of rules and regulations.

Emission limitations and other measures necessary for attainment and maintenance of any national standard, including any measures necessary to implement the requirements of subpart L must be adopted as rules and regulations enforceable by the State agency. Copies of all such rules and regulations must be submitted with the plan. Submittal of a plan setting forth proposed rules and regulations will not satisfy the requirements of this section nor will it be considered a timely submittal.

[51 FR 40674, Nov. 7, 1986]

§ 51.285 Public notification.

By March 1, 1980, the State shall submit a plan revision that contains provisions for:

(a) Notifying the public on a regular basis of instances or areas in which any primary standard was exceeded during any portion of the preceding calendar year,

(b) Advising the public of the health hazards associated with such an exceedance of a primary standard, and

(c) Increasing public awareness of:

(1) Measures which can be taken to prevent a primary standard from being exceeded, and

(2) Ways in which the public can participate in regulatory and other efforts to improve air quality.

[44 FR 27569, May 10, 1979]

§ 51.286 Electronic reporting.

States that wish to receive electronic documents must revise the State Implementation Plan to satisfy the requirements of 40 CFR Part 3—(Electronic reporting).

[70 FR 59887, Oct. 13, 2005]

Subpart P—Protection of Visibility

AUTHORITY: Secs. 110, 114, 121, 160–169, 169A, and 301 of the Clean Air Act, (42 U.S.C. 7410, 7414, 7421, 7470–7479, and 7601).

SOURCE: 45 FR 80089, Dec. 2, 1980, unless otherwise noted.

§ 51.300 Purpose and applicability.

(a) *Purpose.* The primary purposes of this subpart are to require States to develop programs to assure reasonable progress toward meeting the national goal of preventing any future, and remedying any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution; and to establish necessary additional procedures for new source permit applicants, States and Federal Land Managers to use in conducting the visibility impact analysis required for new sources under § 51.166. This subpart sets forth requirements addressing visibility impairment in its two principal forms: "reasonably attributable" impairment (*i.e.*, impairment attributable to a single source/small group of sources) and regional haze (*i.e.*, widespread haze from a multitude of sources which impairs visibility in every direction over a large area).

(b) *Applicability* The provisions of this subpart are applicable to all States as defined in section 302(d) of the Clean Air Act (CAA) except Guam, Puerto Rico, American Samoa, and the Northern Mariana Islands.

[45 FR 80089, Dec. 2, 1980, as amended at 64 FR 35763, July 1, 1999; 82 FR 3122, Jan. 10, 2017]

§ 51.301 Definitions.

For purposes of this subpart:

Adverse impact on visibility means, for purposes of section 307, 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 impairments, 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. This term does not include effects on integral vistas.

Agency means the U.S. Environmental Protection Agency.

BART-eligible source means an *existing stationary facility* as defined in this section.

Baseline visibility condition means the average of the five annual averages of the individual values of daily visibility for the period 2000–2004 unique to each Class I area for either the most impaired days or the clearest days.

Best Available Retrofit Technology (BART) means an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by an existing stationary facility. The emission limitation must be established, on a case-by-case basis, taking into consideration the technology available, the costs of compliance, the energy and nonair quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

Building, structure, or facility 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). Pollutant-emitting activities must 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).

Clearest days means the twenty percent of monitored days in a calendar year with the lowest values of the deciview index.

Current visibility condition means the average of the five annual averages of individual values of daily visibility for the most recent period for which data are available unique to each Class I area for either the most impaired days or the clearest days.

Deciview is the unit of measurement on the deciview index scale for quantifying in a standard manner human perceptions of visibility.

Deciview index means a value for a day that is derived from calculated or measured light extinction, such that uniform increments of the index correspond to uniform incremental changes in perception across the entire range of conditions, from pristine to very obscured. The deciview index is calculated based on the following equation (for the purposes of calculating deciview using IMPROVE data, the atmospheric light extinction coefficient must be calculated from aerosol measurements and an estimate of Rayleigh scattering):

Deciview index = 10 ln (b_{ext}/10 Mm^{-1}).

b_{ext} = the atmospheric light extinction coefficient, expressed in inverse megameters ($Mm-1$).

End of the applicable implementation period means December 31 of the year in which the next periodic comprehensive implementation plan revision is due under § 51.308(f).

Existing stationary facility means any of the following stationary sources of air pollutants, including any reconstructed source, which was not in operation prior to August 7, 1962, and was in existence on August 7, 1977, and has the potential to emit 250 tons per year or more of any air pollutant. In determining potential to emit, fugitive emissions, to the extent quantifiable, must be counted.

Fossil-fuel fired steam electric plants of more than 250 million British thermal units per hour heat input,

Coal cleaning plants (thermal dryers),

Kraft pulp mills,

Portland cement plants,

Primary zinc smelters,

Iron and steel mill plants,

Primary aluminum ore reduction plants,

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 facilities,
Chemical process plants,
Fossil-fuel boilers of more than 250 million British thermal units per hour heat input,
Petroleum storage and transfer facilities with a capacity exceeding 300,000 barrels,
Taconite ore processing facilities,
Glass fiber processing plants, and
Charcoal production facilities.

Federal Class I area means any Federal land that is classified or reclassified *Class I.*

Federal Land Manager means the Secretary of the department with authority over the Federal Class I area (or the Secretary's designee) or, with respect to Roosevelt-Campobello International Park, the Chairman of the Roosevelt-Campobello International Park Commission.

Federally enforceable means all limitations and conditions which are enforceable by the Administrator under the Clean Air Act including those requirements developed pursuant to parts 60 and 61 of this title, requirements within any applicable State Implementation Plan, and any permit requirements established pursuant to §52.21 of this chapter or under regulations approved pursuant to part 51, 52, or 60 of this title.

Fixed capital cost means the capital needed to provide all of the depreciable components.

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

Geographic enhancement for the purpose of §51.308 means a method, procedure, or process to allow a broad regional strategy, such as an emissions trading program designed to achieve greater reasonable progress than BART for regional haze, to accommodate BART for reasonably attributable impairment.

Implementation plan means, for the purposes of this part, any State Implementation Plan, Federal Implementation Plan, or Tribal Implementation Plan.

Indian tribe or *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.

In existence means that the owner or operator has obtained all necessary preconstruction approvals or permits required by Federal, State, or local air pollution emissions and air quality laws or regulations and either has (1) begun, or caused to begin, a continuous program of physical on-site construction of the facility or (2) 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 construction of the facility to be completed in a reasonable time.

In operation means engaged in activity related to the primary design function of the source.

Installation means an identifiable piece of process equipment.

Integral vista means a view perceived from within the mandatory Class I Federal area of a specific landmark or panorama located outside the boundary of the mandatory Class I Federal area.

Least impaired days means the twenty percent of monitored days in a calendar year with the lowest amounts of visibility impairment.

Major stationary source and major modification mean major stationary source and major modification, respectively, as defined in §51.166.

Mandatory Class I Federal Area or *Mandatory Federal Class I Area* means any area identified in part 81, subpart D of this title.

Most impaired days means the twenty percent of monitored days in a calendar year with the highest amounts of anthropogenic visibility impairment.

Natural conditions reflect naturally occurring phenomena that reduce visibility as measured in terms of light extinction, visual range, contrast, or coloration, and may refer to the conditions on a single day or a set of days. These phenomena include, but are not limited to, humidity, fire events, dust storms, volcanic activity, and biogenic emissions from soils and trees. These phenomena may be near or far from a Class I area and may be outside the United States.

Natural visibility means visibility (contrast, coloration, and texture) on a day or days that would have existed under natural conditions. Natural visibility varies with time and location, is estimated or inferred rather than directly measured, and may have long-term trends due to long-term trends in natural conditions.

Natural visibility condition means the average of individual values of daily natural visibility unique to each Class I area for either the most impaired days or the clearest days.

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.

Prescribed fire means any fire intentionally ignited by management actions in accordance with applicable laws, policies, and regulations to meet specific land or resource management objectives.

Reasonably attributable means attributable by visual observation or any other appropriate technique.

Reasonably attributable visibility impairment means visibility impairment that is caused by the emission of air pollutants from one, or a small number of sources.

Reconstruction will be presumed to have taken place where the fixed capital cost of the new component exceeds 50 percent of the fixed capital cost of a comparable entirely new source. Any final decision as to whether reconstruction has occurred must be made in accordance with the provisions of § 60.15 (f) (1) through (3) of this title.

Regional haze means visibility impairment that is caused by the emission of air pollutants from numerous anthropogenic sources located over a wide geographic area. Such sources include, but are not limited to, major and minor stationary sources, mobile sources, and area sources.

Secondary emissions means emissions which occur as a result of the construction or operation of an existing stationary facility but do not come from the existing stationary facility. Secondary emissions may include, but are not limited to, emissions from ships or trains coming to or from the existing stationary facility.

Significant impairment means, for purposes of § 51.303, visibility impairment which, in the judgment of the Administrator, interferes with the management, protection, preservation, or enjoyment of the visitor's visual experience of the mandatory Class I Federal area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency and time of the visibility impairment, and how these factors correlate with (1) times of visitor use of the mandatory Class I Federal area, and (2) the frequency and timing of natural conditions that reduce visibility.

State means "State" as defined in section 302(d) of the CAA.

Stationary Source means any building, structure, facility, or installation which emits or may emit any air pollutant.

Visibility means the degree of perceived clarity when viewing objects at a distance. Visibility includes perceived changes in contrast, coloration, and texture elements in a scene.

Visibility impairment or *anthropogenic visibility impairment* means any humanly perceptible difference due to air pollution from anthropogenic sources between actual visibility and natural visibility on one or more days. Because

natural visibility can only be estimated or inferred, visibility impairment also is estimated or inferred rather than directly measured.

Visibility in any mandatory Class I Federal area includes any integral vista associated with that area.

Wildfire means any fire started by an unplanned ignition caused by lightning; volcanoes; other acts of nature; unauthorized activity; or accidental, human-caused actions, or a prescribed fire that has developed into a wildfire. A wildfire that predominantly occurs on wildland is a natural event.

Wildland means an area in which human activity and development is essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered.

[45 FR 80089, Dec. 2, 1980, as amended at 64 FR 35763, 35774, July 1, 1999; 82 FR 3122, Jan. 10, 2017]

§51.302 Reasonably attributable visibility impairment.

(a) The affected Federal Land Manager may certify, at any time, that there exists reasonably attributable visibility impairment in any mandatory Class I Federal area and identify which single source or small number of sources is responsible for such impairment. The affected Federal Land Manager will provide the certification to the State in which the impairment occurs and the State(s) in which the source(s) is located. The affected Federal Land Manager shall provide the State(s) in which the source(s) is located an opportunity to consult on the basis of the planned certification, in person and at least 60 days prior to providing the certification to the State(s).

(b) The State(s) in which the source(s) is located shall revise its regional haze implementation plan, in accordance with the schedule set forth in paragraph (d) of this section, to include for each source or small number of sources that the Federal Land Manager has identified in whole or in part for reasonably attributable visibility impairment as part of a certification under paragraph (a) of this section:

(1) A determination, based on the factors set forth in §51.308(f)(2), of the control measures, if any, that are necessary with respect to the source or sources in order for the plan to make reasonable progress toward natural visibility conditions in the affected Class I Federal area;

(2) Emission limitations that reflect the degree of emission reduction achievable by such control measures and schedules for compliance as expeditiously as practicable; and

(3) Monitoring, recordkeeping, and reporting requirements sufficient to ensure the enforceability of the emission limitations.

(c) If a source that the Federal Land Manager has identified as responsible in whole or in part for reasonably attributable visibility impairment as part of a certification under paragraph (a) of this section is a BART-eligible source, and if there is not in effect as of the date of the certification a fully or conditionally approved implementation plan addressing the BART requirement for that source (which existing plan may incorporate either source-specific emission limitations reflecting the emission control performance of BART, an alternative program to address the BART requirement under §51.308(e)(2) through (4), or for sources of SO_2, a program approved under paragraph §51.309(d)(4)), then the State shall revise its regional haze implementation plan to meet the requirements of §51.308(e) with respect to that source, taking into account current conditions related to the factors listed in §51.308(e)(1)(ii)(A). This requirement is in addition to the requirement of paragraph (b) of this section.

(d) For any existing reasonably attributable visibility impairment the Federal Land Manager certifies to the State(s) under paragraph (a) of this section, the State(s) shall submit a revision to its regional haze implementation plan that includes the elements described in paragraphs (b) and (c) of this section no later than 3 years after the date of the certification. The State(s) is not required at that time to also revise its reasonable progress goals to reflect any additional emission reductions required from the source or sources. In no case shall such a revision in response to a reasonably

attributable visibility impairment certification be due before July 31, 2021.

[82 FR 3123, Jan. 10, 2017]

§ 51.303 Exemptions from control.

(a)(1) Any existing stationary facility subject to the requirement under § 51.302(c) or § 51.308(e) to install, operate, and maintain BART may apply to the Administrator for an exemption from that requirement.

(2) An application under this section must include all available documentation relevant to the impact of the source's emissions on visibility in any mandatory Class I Federal area and a demonstration by the existing stationary facility that it does not or will not, by itself or in combination with other sources, emit any air pollutant which may be reasonably anticipated to cause or contribute to a significant impairment of visibility in any mandatory Class I Federal area.

(b) Any fossil-fuel fired power plant with a total generating capacity of 750 megawatts or more may receive an exemption from BART only if the owner or operator of such power plant demonstrates to the satisfaction of the Administrator that such power plant is located at such a distance from all mandatory Class I Federal areas that such power plant does not or will not, by itself or in combination with other sources, emit any air pollutant which may reasonably be anticipated to cause or contribute to significant impairment of visibility in any such mandatory Class I Federal area.

(c) Application under this § 51.303 must be accompanied by a written concurrence from the State with regulatory authority over the source.

(d) The existing stationary facility must give prior written notice to all affected Federal Land Managers of any application for exemption under this § 51.303.

(e) The Federal Land Manager may provide an initial recommendation or comment on the disposition of such application. Such recommendation, where provided, must be part of the exemption application. This recommendation is not to be construed as the concurrence required under paragraph (h) of this section.

(f) The Administrator, within 90 days of receipt of an application for exemption from control, will provide notice of receipt of an exemption application and notice of opportunity for public hearing on the application.

(g) After notice and opportunity for public hearing, the Administrator may grant or deny the exemption. For purposes of judicial review, final EPA action on an application for an exemption under this § 51.303 will not occur until EPA approves or disapproves the State Implementation Plan revision.

(h) An exemption granted by the Administrator under this § 51.303 will be effective only upon concurrence by all affected Federal Land Managers with the Administrator's determination.

[45 FR 80089, Dec. 2, 1980, as amended at 64 FR 35774, July 1, 1999; 82 FR 3123, Jan. 10, 2017]

§ 51.304 Identification of integral vistas.

(a) Federal Land Managers were required to identify any integral vistas on or before December 31, 1985, according to criteria the Federal Land Managers developed. These criteria must have included, but were not limited to, whether the integral vista was important to the visitor's visual experience of the mandatory Class I Federal area.

(b) The following integral vistas were identified by Federal Land Managers: At Roosevelt Campobello International Park, from the observation point of Roosevelt cottage and beach area, the viewing angle from 244 to 256 degrees; and at Roosevelt Campobello International Park, from the observation point of Friar's Head, the viewing angle from 154 to 194 degrees.

(c) The State must list in its implementation plan any integral vista listed in paragraph (b) of this section.

[82 FR 3123, Jan. 10, 2017]

§ 51.305 Monitoring for reasonably attributable visibility impairment.

For the purposes of addressing reasonably attributable visibility impairment, if the Administrator, Regional Administrator, or the affected Federal Land Manager has advised a State containing a mandatory Class I Federal area of a need for monitoring to assess

reasonably attributable visibility impairment at the mandatory Class I Federal area in addition to the monitoring currently being conducted to meet the requirements of § 51.308(d)(4), the State must include in the next implementation plan revision to meet the requirement of § 51.308(f) an appropriate strategy for evaluating reasonably attributable visibility impairment in the mandatory Class I Federal area by visual observation or other appropriate monitoring techniques. Such strategy must take into account current and anticipated visibility monitoring research, the availability of appropriate monitoring techniques, and such guidance as is provided by the Agency.

[82 FR 3124, Jan. 10, 2017]

§ 51.306 [Reserved]

§ 51.307 New source review.

(a) For purposes of new source review of any new major stationary source or major modification that would be constructed in an area that is designated attainment or unclassified under section 107(d) of the CAA, the State plan must, in any review under § 51.166 with respect to visibility protection and analyses, provide for:

(1) Written notification of all affected Federal Land Managers of any proposed new major stationary source or major modification that may affect visibility in any Federal Class I area. Such notification must be made in writing and include a copy of all information relevant to the permit application within 30 days of receipt of and at least 60 days prior to public hearing by the State on the application for permit to construct. Such notification must include an analysis of the anticipated impacts on visibility in any Federal Class I area,

(2) Where the State requires or receives advance notification (e.g. early consultation with the source prior to submission of the application or notification of intent to monitor under § 51.166) of a permit application of a source that may affect visibility the State must notify all affected Federal Land Managers within 30 days of such advance notification, and

(3) Consideration of any analysis performed by the Federal Land Manager, provided within 30 days of the notification and analysis required by paragraph (a)(1) of this section, that such proposed new major stationary source or major modification may have an adverse impact on visibility in any Federal Class I area. Where the State finds that such an analysis does not demonstrate to the satisfaction of the State that an adverse impact will result in the Federal Class I area, the State must, in the notice of public hearing, either explain its decision or give notice as to where the explanation can be obtained.

(b) The plan shall also provide for the review of any new major stationary source or major modification:

(1) That may have an impact on any integral vista of a mandatory Class I Federal area listed in § 51.304(b), or

(2) That proposes to locate in an area classified as nonattainment under section 107(d)(1) of the Clean Air Act that may have an impact on visibility in any mandatory Class I Federal area.

(c) Review of any major stationary source or major modification under paragraph (b) of this section, shall be conducted in accordance with paragraph (a) of this section, and § 51.166(o), (p)(1) through (2), and (q). In conducting such reviews the State must ensure that the source's emissions will be consistent with making reasonable progress toward the national visibility goal referred to in § 51.300(a). The State may take into account the costs of compliance, the time necessary for compliance, the energy and nonair quality environmental impacts of compliance, and the useful life of the source.

(d) The State may require monitoring of visibility in any Federal Class I area near the proposed new stationary source or major modification for such purposes and by such means as the State deems necessary and appropriate.

[45 FR 80089, Dec. 2, 1980, as amended at 64 FR 35765, 35774, July 1, 1999; 82 FR 3124, Jan. 10, 2017]

§ 51.308 Regional haze program requirements.

(a) *What is the purpose of this section?* This section establishes requirements

for implementation plans, plan revisions, and periodic progress reviews to address regional haze.

(b) *When are the first implementation plans due under the regional haze program?* Except as provided in § 51.309(c), each State identified in § 51.300(b) must submit, for the entire State, an implementation plan for regional haze meeting the requirements of paragraphs (d) and (e) of this section no later than December 17, 2007.

(c) [Reserved]

(d) *What are the core requirements for the implementation plan for regional haze?* The State must address regional haze in each mandatory Class I Federal area located within the State and in each mandatory Class I Federal area located outside the State which may be affected by emissions from within the State. To meet the core requirements for regional haze for these areas, the State must submit an implementation plan containing the following plan elements and supporting documentation for all required analyses:

(1) *Reasonable progress goals.* For each mandatory Class I Federal area located within the State, the State must establish goals (expressed in deciviews) that provide for reasonable progress towards achieving natural visibility conditions. The reasonable progress goals must provide for an improvement in visibility for the most impaired days over the period of the implementation plan and ensure no degradation in visibility for the least impaired days over the same period.

(i) In establishing a reasonable progress goal for any mandatory Class I Federal area within the State, the State must:

(A) Consider the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected sources, and include a demonstration showing how these factors were taken into consideration in selecting the goal.

(B) Analyze and determine the rate of progress needed to attain natural visibility conditions by the year 2064. To calculate this rate of progress, the State must compare baseline visibility conditions to natural visibility conditions in the mandatory Federal Class I area and determine the uniform rate of visibility improvement (measured in deciviews) that would need to be maintained during each implementation period in order to attain natural visibility conditions by 2064. In establishing the reasonable progress goal, the State must consider the uniform rate of improvement in visibility and the emission reduction measures needed to achieve it for the period covered by the implementation plan.

(ii) For the period of the implementation plan, if the State establishes a reasonable progress goal that provides for a slower rate of improvement in visibility than the rate that would be needed to attain natural conditions by 2064, the State must demonstrate, based on the factors in paragraph (d)(1)(i)(A) of this section, that the rate of progress for the implementation plan to attain natural conditions by 2064 is not reasonable; and that the progress goal adopted by the State is reasonable. The State must provide to the public for review as part of its implementation plan an assessment of the number of years it would take to attain natural conditions if visibility improvement continues at the rate of progress selected by the State as reasonable.

(iii) In determining whether the State's goal for visibility improvement provides for reasonable progress towards natural visibility conditions, the Administrator will evaluate the demonstrations developed by the State pursuant to paragraphs (d)(1)(i) and (d)(1)(ii) of this section.

(iv) In developing each reasonable progress goal, the State must consult with those States which may reasonably be anticipated to cause or contribute to visibility impairment in the mandatory Class I Federal area. In any situation in which the State cannot agree with another such State or group of States that a goal provides for reasonable progress, the State must describe in its submittal the actions taken to resolve the disagreement. In reviewing the State's implementation plan submittal, the Administrator will take this information into account in determining whether the State's goal for visibility improvement provides for

reasonable progress towards natural visibility conditions.

(v) The reasonable progress goals established by the State are not directly enforceable but will be considered by the Administrator in evaluating the adequacy of the measures in the implementation plan to achieve the progress goal adopted by the State.

(vi) The State may not adopt a reasonable progress goal that represents less visibility improvement than is expected to result from implementation of other requirements of the CAA during the applicable planning period.

(2) *Calculations of baseline and natural visibility conditions.* For each mandatory Class I Federal area located within the State, the State must determine the following visibility conditions (expressed in deciviews):

(i) Baseline visibility conditions for the most impaired and least impaired days. The period for establishing baseline visibility conditions is 2000 to 2004. Baseline visibility conditions must be calculated, using available monitoring data, by establishing the average degree of visibility impairment for the most and least impaired days for each calendar year from 2000 to 2004. The baseline visibility conditions are the average of these annual values. For mandatory Class I Federal areas without onsite monitoring data for 2000–2004, the State must establish baseline values using the most representative available monitoring data for 2000–2004, in consultation with the Administrator or his or her designee;

(ii) For an implementation plan that is submitted by 2003, the period for establishing baseline visibility conditions for the period of the first long-term strategy is the most recent 5-year period for which visibility monitoring data are available for the mandatory Class I Federal areas addressed by the plan. For mandatory Class I Federal areas without onsite monitoring data, the State must establish baseline values using the most representative available monitoring data, in consultation with the Administrator or his or her designee;

(iii) Natural visibility conditions for the most impaired and least impaired days. Natural visibility conditions must be calculated by estimating the degree of visibility impairment existing under natural conditions for the most impaired and least impaired days, based on available monitoring information and appropriate data analysis techniques; and

(iv) For the first implementation plan addressing the requirements of paragraphs (d) and (e) of this section, the number of deciviews by which baseline conditions exceed natural visibility conditions for the most impaired and least impaired days.

(3) *Long-term strategy for regional haze.* Each State listed in §51.300(b) must submit a long-term strategy that addresses regional haze visibility impairment for each mandatory Class I Federal area within the State and for each mandatory Class I Federal area located outside the State that may be affected by emissions from the State. The long-term strategy must include enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the reasonable progress goals established by States having mandatory Class I Federal areas. In establishing its long-term strategy for regional haze, the State must meet the following requirements:

(i) Where the State has emissions that are reasonably anticipated to contribute to visibility impairment in any mandatory Class I Federal area located in another State or States, the State must consult with the other State(s) in order to develop coordinated emission management strategies. The State must consult with any other State having emissions that are reasonably anticipated to contribute to visibility impairment in any mandatory Class I Federal area within the State.

(ii) Where other States cause or contribute to impairment in a mandatory Class I Federal area, the State must demonstrate that it has included in its implementation plan all measures necessary to obtain its share of the emission reductions needed to meet the progress goal for the area. If the State has participated in a regional planning process, the State must ensure it has included all measures needed to achieve its apportionment of emission reduction obligations agreed upon through that process.

(iii) The State must document the technical basis, including modeling, monitoring and emissions information, on which the State is relying to determine its apportionment of emission reduction obligations necessary for achieving reasonable progress in each mandatory Class I Federal area it affects. The State may meet this requirement by relying on technical analyses developed by the regional planning organization and approved by all State participants. The State must identify the baseline emissions inventory on which its strategies are based. The baseline emissions inventory year is presumed to be the most recent year of the consolidate periodic emissions inventory.

(iv) The State must identify all anthropogenic sources of visibility impairment considered by the State in developing its long-term strategy. The State should consider major and minor stationary sources, mobile sources, and area sources.

(v) The State must consider, at a minimum, the following factors in developing its long-term strategy:

(A) Emission reductions due to ongoing air pollution control programs, including measures to address reasonably attributable visibility impairment;

(B) Measures to mitigate the impacts of construction activities;

(C) Emissions limitations and schedules for compliance to achieve the reasonable progress goal;

(D) Source retirement and replacement schedules;

(E) Smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the State for these purposes;

(F) Enforceability of emissions limitations and control measures; and

(G) The anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy.

(4) *Monitoring strategy and other implementation plan requirements.* The State must submit with the implementation plan a monitoring strategy for measuring, characterizing, and reporting of regional haze visibility impairment that is representative of all mandatory Class I Federal areas within the State. This monitoring strategy must be coordinated with the monitoring strategy required in § 51.305 for reasonably attributable visibility impairment. Compliance with this requirement may be met through participation in the Interagency Monitoring of Protected Visual Environments network. The implementation plan must also provide for the following:

(i) The establishment of any additional monitoring sites or equipment needed to assess whether reasonable progress goals to address regional haze for all mandatory Class I Federal areas within the State are being achieved.

(ii) Procedures by which monitoring data and other information are used in determining the contribution of emissions from within the State to regional haze visibility impairment at mandatory Class I Federal areas both within and outside the State.

(iii) For a State with no mandatory Class I Federal areas, procedures by which monitoring data and other information are used in determining the contribution of emissions from within the State to regional haze visibility impairment at mandatory Class I Federal areas in other States.

(iv) The implementation plan must provide for the reporting of all visibility monitoring data to the Administrator at least annually for each mandatory Class I Federal area in the State. To the extent possible, the State should report visibility monitoring data electronically.

(v) A statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any mandatory Class I Federal area. The inventory must include emissions for a baseline year, emissions for the most recent year for which data are available, and estimates of future projected emissions. The State must also include a commitment to update the inventory periodically.

(vi) Other elements, including reporting, recordkeeping, and other measures, necessary to assess and report on visibility.

(e) *Best Available Retrofit Technology (BART) requirements for regional haze visibility impairment.* The State must

submit an implementation plan containing emission limitations representing BART and schedules for compliance with BART for each BART-eligible source that may reasonably be anticipated to cause or contribute to any impairment of visibility in any mandatory Class I Federal area, unless the State demonstrates that an emissions trading program or other alternative will achieve greater reasonable progress toward natural visibility conditions.

(1) To address the requirements for BART, the State must submit an implementation plan containing the following plan elements and include documentation for all required analyses:

(i) A list of all BART-eligible sources within the State.

(ii) A determination of BART for each BART-eligible source in the State that emits any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility in any mandatory Class I Federal area. All such sources are subject to BART.

(A) The determination of BART must be based on an analysis of the best system of continuous emission control technology available and associated emission reductions achievable for each BART-eligible source that is subject to BART within the State. In this analysis, the State must take into consideration the technology available, the costs of compliance, the energy and nonair quality environmental impacts of compliance, any pollution control equipment in use at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

(B) The determination of BART for fossil-fuel fired power plants having a total generating capacity greater than 750 megawatts must be made pursuant to the guidelines in appendix Y of this part (Guidelines for BART Determinations Under the Regional Haze Rule).

(C) *Exception.* A State is not required to make a determination of BART for SO_2 or for NO_X if a BART-eligible source has the potential to emit less than 40 tons per year of such pollutant(s), or for PM_{10} if a BART-eligible source has the potential to emit less than 15 tons per year of such pollutant.

(iii) If the State determines in establishing BART that technological or economic limitations on the applicability of measurement methodology to a particular source would make the imposition of an emission standard infeasible, it may instead prescribe a design, equipment, work practice, or other operational standard, or combination thereof, to require the application of BART. Such standard, to the degree possible, is to set forth the emission reduction to be achieved by implementation of such design, equipment, work practice or operation, and must provide for compliance by means which achieve equivalent results.

(iv) A requirement that each source subject to BART be required to install and operate BART as expeditiously as practicable, but in no event later than 5 years after approval of the implementation plan revision.

(v) A requirement that each source subject to BART maintain the control equipment required by this subpart and establish procedures to ensure such equipment is properly operated and maintained.

(2) A State may opt to implement or require participation in an emissions trading program or other alternative measure rather than to require sources subject to BART to install, operate, and maintain BART. Such an emissions trading program or other alternative measure must achieve greater reasonable progress than would be achieved through the installation and operation of BART. For all such emission trading programs or other alternative measures, the State must submit an implementation plan containing the following plan elements and include documentation for all required analyses:

(i) A demonstration that the emissions trading program or other alternative measure will achieve greater reasonable progress than would have resulted from the installation and operation of BART at all sources subject to BART in the State and covered by the alternative program. This demonstration must be based on the following:

(A) A list of all BART-eligible sources within the State.

(B) A list of all BART-eligible sources and all BART source categories covered by the alternative program. The State is not required to include every BART source category or every BART-eligible source within a BART source category in an alternative program, but each BART-eligible source in the State must be subject to the requirements of the alternative program, have a federally enforceable emission limitation determined by the State and approved by EPA as meeting BART in accordance with section 302(c) or paragraph (e)(1) of this section, or otherwise addressed under paragraphs (e)(1) or (e)(4)of this section.

(C) An analysis of the best system of continuous emission control technology available and associated emission reductions achievable for each source within the State subject to BART and covered by the alternative program. This analysis must be conducted by making a determination of BART for each source subject to BART and covered by the alternative program as provided for in paragraph (e)(1) of this section, unless the emissions trading program or other alternative measure has been designed to meet a requirement other than BART (such as the core requirement to have a long-term strategy to achieve the reasonable progress goals established by States). In this case, the State may determine the best system of continuous emission control technology and associated emission reductions for similar types of sources within a source category based on both source-specific and category-wide information, as appropriate.

(D) An analysis of the projected emissions reductions achievable through the trading program or other alternative measure.

(E) A determination under paragraph (e)(3) of this section or otherwise based on the clear weight of evidence that the trading program or other alternative measure achieves greater reasonable progress than would be achieved through the installation and operation of BART at the covered sources.

(ii) [Reserved]

(iii) A requirement that all necessary emission reductions take place during the period of the first long-term strategy for regional haze. To meet this requirement, the State must provide a detailed description of the emissions trading program or other alternative measure, including schedules for implementation, the emission reductions required by the program, all necessary administrative and technical procedures for implementing the program, rules for accounting and monitoring emissions, and procedures for enforcement.

(iv) A demonstration that the emission reductions resulting from the emissions trading program or other alternative measure will be surplus to those reductions resulting from measures adopted to meet requirements of the CAA as of the baseline date of the SIP.

(v) At the State's option, a provision that the emissions trading program or other alternative measure may include a geographic enhancement to the program to address the requirement under §51.302(b) or (c) related to reasonably attributable impairment from the pollutants covered under the emissions trading program or other alternative measure.

(vi) For plans that include an emissions trading program that establishes a cap on total annual emissions of SO_2 or NO_X from sources subject to the program, requires the owners and operators of sources to hold allowances or authorizations to emit equal to emissions, and allows the owners and operators of sources and other entities to purchase, sell, and transfer allowances, the following elements are required concerning the emissions covered by the cap:

(A) Applicability provisions defining the sources subject to the program. The State must demonstrate that the applicability provisions (including the size criteria for including sources in the program) are designed to prevent any significant potential shifting within the State of production and emissions from sources in the program to sources outside the program. In the case of a program covering sources in

multiple States, the States must demonstrate that the applicability provisions in each State cover essentially the same size facilities and, if source categories are specified, cover the same source categories and prevent any significant, potential shifting within such States of production and emissions to sources outside the program.

(B) Allowance provisions ensuring that the total value of allowances (in tons) issued each year under the program will not exceed the emissions cap (in tons) on total annual emissions from the sources in the program.

(C) Monitoring provisions providing for consistent and accurate measurements of emissions from sources in the program to ensure that each allowance actually represents the same specified tonnage of emissions and that emissions are measured with similar accuracy at all sources in the program. The monitoring provisions must require that boilers, combustion turbines, and cement kilns in the program allowed to sell or transfer allowances must comply with the requirements of part 75 of this chapter. The monitoring provisions must require that other sources in the program allowed to sell or transfer allowances must provide emissions information with the same precision, reliability, accessibility, and timeliness as information provided under part 75 of this chapter.

(D) Recordkeeping provisions that ensure the enforceability of the emissions monitoring provisions and other program requirements. The recordkeeping provisions must require that boilers, combustion turbines, and cement kilns in the program allowed to sell or transfer allowances must comply with the recordkeeping provisions of part 75 of this chapter. The recordkeeping provisions must require that other sources in the program allowed to sell or transfer allowances must comply with recordkeeping requirements that, as compared with the recordkeeping provisions under part 75 of this chapter, are of comparable stringency and require recording of comparable types of information and retention of the records for comparable periods of time.

(E) Reporting provisions requiring timely reporting of monitoring data with sufficient frequency to ensure the enforceability of the emissions monitoring provisions and other program requirements and the ability to audit the program. The reporting provisions must require that boilers, combustion turbines, and cement kilns in the program allowed to sell or transfer allowances must comply with the reporting provisions of part 75 of this chapter, except that, if the Administrator is not the tracking system administrator for the program, emissions may be reported to the tracking system administrator, rather than to the Administrator. The reporting provisions must require that other sources in the program allowed to sell or transfer allowances must comply with reporting requirements that, as compared with the reporting provisions under part 75 of this chapter, are of comparable stringency and require reporting of comparable types of information and require comparable timeliness and frequency of reporting.

(F) Tracking system provisions which provide for a tracking system that is publicly available in a secure, centralized database to track in a consistent manner all allowances and emissions in the program.

(G) Authorized account representative provisions ensuring that the owners and operators of a source designate one individual who is authorized to represent the owners and operators in all matters pertaining to the trading program.

(H) Allowance transfer provisions providing procedures that allow timely transfer and recording of allowances, minimize administrative barriers to the operation of the allowance market, and ensure that such procedures apply uniformly to all sources and other potential participants in the allowance market.

(I) Compliance provisions prohibiting a source from emitting a total tonnage of a pollutant that exceeds the tonnage value of its allowance holdings, including the methods and procedures for determining whether emissions exceed allowance holdings. Such method and procedures shall apply consistently from source to source.

(J) Penalty provisions providing for mandatory allowance deductions for

excess emissions that apply consistently from source to source. The tonnage value of the allowances deducted shall equal at least three times the tonnage of the excess emissions.

(K) For a trading program that allows banking of allowances, provisions clarifying any restrictions on the use of these banked allowances.

(L) Program assessment provisions providing for periodic program evaluation to assess whether the program is accomplishing its goals and whether modifications to the program are needed to enhance performance of the program.

(3) A State which opts under 40 CFR 51.308(e)(2) to implement an emissions trading program or other alternative measure rather than to require sources subject to BART to install, operate, and maintain BART may satisfy the final step of the demonstration required by that section as follows: If the distribution of emissions is not substantially different than under BART, and the alternative measure results in greater emission reductions, then the alternative measure may be deemed to achieve greater reasonable progress. If the distribution of emissions is significantly different, the State must conduct dispersion modeling to determine differences in visibility between BART and the trading program for each impacted Class I area, for the worst and best 20 percent of days. The modeling would demonstrate "greater reasonable progress" if both of the following two criteria are met:

(i) Visibility does not decline in any Class I area, and

(ii) There is an overall improvement in visibility, determined by comparing the average differences between BART and the alternative over all affected Class I areas.

(4) A State whose sources are subject to a trading program established under part 97 of this chapter in accordance with a federal implementation plan set forth in § 52.38 or § 52.39 of this chapter or a trading program established under a SIP revision approved by the Administrator as meeting the requirements of § 52.38 or § 52.39 of this chapter need not require BART-eligible fossil fuel-fired steam electric plants in the State to install, operate, and maintain BART for the pollutant covered by such trading program in the State. A State may adopt provisions, consistent with the requirements applicable to the State's sources for such trading program, for a geographic enhancement to the trading program to address any requirement under § 51.302(b) or (c) related to reasonably attributable impairment from the pollutant covered by such trading program in that State.

(5) After a State has met the requirements for BART or implemented an emissions trading program or other alternative measure that achieves more reasonable progress than the installation and operation of BART, BART-eligible sources will be subject to the requirements of paragraphs (d) and (f) of this section, as applicable, in the same manner as other sources.

(6) Any BART-eligible facility subject to the requirement under paragraph (e) of this section to install, operate, and maintain BART may apply to the Administrator for an exemption from that requirement. An application for an exemption will be subject to the requirements of § 51.303(a)(2)–(h).

(f) *Requirements for periodic comprehensive revisions of implementation plans for regional haze.* Each State identified in § 51.300(b) must revise and submit its regional haze implementation plan revision to EPA by July 31, 2021, July 31, 2028, and every 10 years thereafter. The plan revision due on or before July 31, 2021, must include a commitment by the State to meet the requirements of paragraph (g) of this section. In each plan revision, the State must address regional haze in each mandatory Class I Federal area located within the State and in each mandatory Class I Federal area located outside the State that may be affected by emissions from within the State. To meet the core requirements for regional haze for these areas, the State must submit an implementation plan containing the following plan elements and supporting documentation for all required analyses:

(1) *Calculations of baseline, current, and natural visibility conditions; progress to date; and the uniform rate of progress.* For each mandatory Class I Federal area located within the State, the State must determine the following:

(i) *Baseline visibility conditions for the most impaired and clearest days.* The period for establishing baseline visibility conditions is 2000 to 2004. The State must calculate the baseline visibility conditions for the most impaired days and the clearest days using available monitoring data. To determine the baseline visibility condition, the State must calculate the average of the annual deciview index values for the most impaired days and for the clearest days for the calendar years from 2000 to 2004. The baseline visibility condition for the most impaired days or the clearest days is the average of the respective annual values. For purposes of calculating the uniform rate of progress, the baseline visibility condition for the most impaired days must be associated with the last day of 2004. For mandatory Class I Federal areas without onsite monitoring data for 2000–2004, the State must establish baseline values using the most representative available monitoring data for 2000–2004, in consultation with the Administrator or his or her designee. For mandatory Class I Federal areas with incomplete monitoring data for 2000–2004, the State must establish baseline values using the 5 complete years of monitoring data closest in time to 2000–2004.

(ii) *Natural visibility conditions for the most impaired and clearest days.* A State must calculate natural visibility condition by estimating the average deciview index existing under natural conditions for the most impaired days or the clearest days based on available monitoring information and appropriate data analysis techniques; and

(iii) *Current visibility conditions for the most impaired and clearest days.* The period for calculating current visibility conditions is the most recent 5-year period for which data are available. The State must calculate the current visibility conditions for the most impaired days and the clearest days using available monitoring data. To calculate each current visibility condition, the State must calculate the average of the annual deciview index values for the years in the most recent 5-year period. The current visibility condition for the most impaired or the clearest days is the average of the respective annual values.

(iv) *Progress to date for the most impaired and clearest days.* Actual progress made towards the natural visibility condition since the baseline period, and actual progress made during the previous implementation period up to and including the period for calculating current visibility conditions, for the most impaired and for the clearest days.

(v) *Differences between current visibility condition and natural visibility condition.* The number of deciviews by which the current visibility condition exceeds the natural visibility condition, for the most impaired and for the clearest days.

(vi) *Uniform rate of progress.* (A) The uniform rate of progress for each mandatory Class I Federal area in the State. To calculate the uniform rate of progress, the State must compare the baseline visibility condition for the most impaired days to the natural visibility condition for the most impaired days in the mandatory Class I Federal area and determine the uniform rate of visibility improvement (measured in deciviews of improvement per year) that would need to be maintained during each implementation period in order to attain natural visibility conditions by the end of 2064.

(B) As part of its implementation plan submission, the State may propose (1) an adjustment to the uniform rate of progress for a mandatory Class I Federal area to account for impacts from anthropogenic sources outside the United States and/or (2) an adjustment to the uniform rate of progress for the mandatory Class I Federal area to account for impacts from wildland prescribed fires that were conducted with the objective to establish, restore, and/or maintain sustainable and resilient wildland ecosystems, to reduce the risk of catastrophic wildfires, and/or to preserve endangered or threatened species during which appropriate basic smoke management practices were applied. To calculate the proposed adjustment(s), the State must add the estimated impact(s) to the natural visibility condition and compare the baseline visibility condition for the most impaired days to the resulting sum. If the Administrator determines that the State

has estimated the impact(s) from anthropogenic sources outside the United States and/or wildland prescribed fires using scientifically valid data and methods, the Administrator may approve the proposed adjustment(s) to the uniform rate of progress.

(2) *Long-term strategy for regional haze.* Each State must submit a long-term strategy that addresses regional haze visibility impairment for each mandatory Class I Federal area within the State and for each mandatory Class I Federal area located outside the State that may be affected by emissions from the State. The long-term strategy must include the enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress, as determined pursuant to (f)(2)(i) through (iv). In establishing its long-term strategy for regional haze, the State must meet the following requirements:

(i) The State must evaluate and determine the emission reduction measures that are necessary to make reasonable progress by considering the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected anthropogenic source of visibility impairment. The State should consider evaluating major and minor stationary sources or groups of sources, mobile sources, and area sources. The State must include in its implementation plan a description of the criteria it used to determine which sources or groups of sources it evaluated and how the four factors were taken into consideration in selecting the measures for inclusion in its long-term strategy. In considering the time necessary for compliance, if the State concludes that a control measure cannot reasonably be installed and become operational until after the end of the implementation period, the State may not consider this fact in determining whether the measure is necessary to make reasonable progress.

(ii) The State must consult with those States that have emissions that are reasonably anticipated to contribute to visibility impairment in the mandatory Class I Federal area to develop coordinated emission management strategies containing the emission reductions necessary to make reasonable progress.

(A) The State must demonstrate that it has included in its implementation plan all measures agreed to during state-to-state consultations or a regional planning process, or measures that will provide equivalent visibility improvement.

(B) The State must consider the emission reduction measures identified by other States for their sources as being necessary to make reasonable progress in the mandatory Class I Federal area.

(C) In any situation in which a State cannot agree with another State on the emission reduction measures necessary to make reasonable progress in a mandatory Class I Federal area, the State must describe the actions taken to resolve the disagreement. In reviewing the State's implementation plan, the Administrator will take this information into account in determining whether the plan provides for reasonable progress at each mandatory Class I Federal area that is located in the State or that may be affected by emissions from the State. All substantive interstate consultations must be documented.

(iii) The State must document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the State is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects. The State may meet this requirement by relying on technical analyses developed by a regional planning process and approved by all State participants. The emissions information must include, but need not be limited to, information on emissions in a year at least as recent as the most recent year for which the State has submitted emission inventory information to the Administrator in compliance with the triennial reporting requirements of subpart A of this part. However, if a State has made a submission for a new inventory year to meet the requirements of subpart A in the period

12 months prior to submission of the SIP, the State may use the inventory year of its prior submission.

(iv) The State must consider the following additional factors in developing its long-term strategy:

(A) Emission reductions due to ongoing air pollution control programs, including measures to address reasonably attributable visibility impairment;

(B) Measures to mitigate the impacts of construction activities;

(C) Source retirement and replacement schedules;

(D) Basic smoke management practices for prescribed fire used for agricultural and wildland vegetation management purposes and smoke management programs; and

(E) The anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy.

(3) *Reasonable progress goals.* (i) A state in which a mandatory Class I Federal area is located must establish reasonable progress goals (expressed in deciviews) that reflect the visibility conditions that are projected to be achieved by the end of the applicable implementation period as a result of those enforceable emissions limitations, compliance schedules, and other measures required under paragraph (f)(2) of this section that can be fully implemented by the end of the applicable implementation period, as well as the implementation of other requirements of the CAA. The long-term strategy and the reasonable progress goals must provide for an improvement in visibility for the most impaired days since the baseline period and ensure no degradation in visibility for the clearest days since the baseline period.

(ii)(A) If a State in which a mandatory Class I Federal area is located establishes a reasonable progress goal for the most impaired days that provides for a slower rate of improvement in visibility than the uniform rate of progress calculated under paragraph (f)(1)(vi) of this section, the State must demonstrate, based on the analysis required by paragraph (f)(2)(i) of this section, that there are no additional emission reduction measures for anthropogenic sources or groups of sources in the State that may reasonably be anticipated to contribute to visibility impairment in the Class I area that would be reasonable to include in the long-term strategy. The State must provide a robust demonstration, including documenting the criteria used to determine which sources or groups or sources were evaluated and how the four factors required by paragraph (f)(2)(i) were taken into consideration in selecting the measures for inclusion in its long-term strategy. The State must provide to the public for review as part of its implementation plan an assessment of the number of years it would take to attain natural visibility conditions if visibility improvement were to continue at the rate of progress selected by the State as reasonable for the implementation period.

(B) If a State contains sources which are reasonably anticipated to contribute to visibility impairment in a mandatory Class I Federal area in another State for which a demonstration by the other State is required under (f)(3)(ii)(A), the State must demonstrate that there are no additional emission reduction measures for anthropogenic sources or groups of sources in the State that may reasonably be anticipated to contribute to visibility impairment in the Class I area that would be reasonable to include in its own long-term strategy. The State must provide a robust demonstration, including documenting the criteria used to determine which sources or groups or sources were evaluated and how the four factors required by paragraph (f)(2)(i) were taken into consideration in selecting the measures for inclusion in its long-term strategy.

(iii) The reasonable progress goals established by the State are not directly enforceable but will be considered by the Administrator in evaluating the adequacy of the measures in the implementation plan in providing for reasonable progress towards achieving natural visibility conditions at that area.

(iv) In determining whether the State's goal for visibility improvement provides for reasonable progress towards natural visibility conditions, the Administrator will also evaluate the demonstrations developed by the State

pursuant to paragraphs (f)(2) and (f)(3)(ii)(A) of this section and the demonstrations provided by other States pursuant to paragraphs (f)(2) and (f)(3)(ii)(B) of this section.

(4) If the Administrator, Regional Administrator, or the affected Federal Land Manager has advised a State of a need for additional monitoring to assess reasonably attributable visibility impairment at the mandatory Class I Federal area in addition to the monitoring currently being conducted, the State must include in the plan revision an appropriate strategy for evaluating reasonably attributable visibility impairment in the mandatory Class I Federal area by visual observation or other appropriate monitoring techniques.

(5) So that the plan revision will serve also as a progress report, the State must address in the plan revision the requirements of paragraphs (g)(1) through (5) of this section. However, the period to be addressed for these elements shall be the period since the most recent progress report.

(6) *Monitoring strategy and other implementation plan requirements.* The State must submit with the implementation plan a monitoring strategy for measuring, characterizing, and reporting of regional haze visibility impairment that is representative of all mandatory Class I Federal areas within the State. Compliance with this requirement may be met through participation in the Interagency Monitoring of Protected Visual Environments network. The implementation plan must also provide for the following:

(i) The establishment of any additional monitoring sites or equipment needed to assess whether reasonable progress goals to address regional haze for all mandatory Class I Federal areas within the State are being achieved.

(ii) Procedures by which monitoring data and other information are used in determining the contribution of emissions from within the State to regional haze visibility impairment at mandatory Class I Federal areas both within and outside the State.

(iii) For a State with no mandatory Class I Federal areas, procedures by which monitoring data and other information are used in determining the contribution of emissions from within the State to regional haze visibility impairment at mandatory Class I Federal areas in other States.

(iv) The implementation plan must provide for the reporting of all visibility monitoring data to the Administrator at least annually for each mandatory Class I Federal area in the State. To the extent possible, the State should report visibility monitoring data electronically.

(v) A statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any mandatory Class I Federal area. The inventory must include emissions for the most recent year for which data are available, and estimates of future projected emissions. The State must also include a commitment to update the inventory periodically.

(vi) Other elements, including reporting, recordkeeping, and other measures, necessary to assess and report on visibility.

(g) *Requirements for periodic reports describing progress towards the reasonable progress goals.* Each State identified in § 51.300(b) must periodically submit a report to the Administrator evaluating progress towards the reasonable progress goal for each mandatory Class I Federal area located within the State and in each mandatory Class I Federal area located outside the State that may be affected by emissions from within the State. The first progress report is due 5 years from submittal of the initial implementation plan addressing paragraphs (d) and (e) of this section. The first progress reports must be in the form of implementation plan revisions that comply with the procedural requirements of § 51.102 and § 51.103. Subsequent progress reports are due by January 31, 2025, July 31, 2033, and every 10 years thereafter. Subsequent progress reports must be made available for public inspection and comment for at least 30 days prior to submission to EPA and all comments received from the public must be submitted to EPA along with the subsequent progress report, along with an explanation of any changes to the progress report made in response to

these comments. Periodic progress reports must contain at a minimum the following elements:

(1) A description of the status of implementation of all measures included in the implementation plan for achieving reasonable progress goals for mandatory Class I Federal areas both within and outside the State.

(2) A summary of the emissions reductions achieved throughout the State through implementation of the measures described in paragraph (g)(1) of this section.

(3) For each mandatory Class I Federal area within the State, the State must assess the following visibility conditions and changes, with values for most impaired, least impaired and/or clearest days as applicable expressed in terms of 5-year averages of these annual values. The period for calculating current visibility conditions is the most recent 5-year period preceding the required date of the progress report for which data are available as of a date 6 months preceding the required date of the progress report.

(i)(A) Progress reports due before January 31, 2025. The current visibility conditions for the most impaired and least impaired days.

(B) Progress reports due on and after January 31, 2025. The current visibility conditions for the most impaired and clearest days;

(ii)(A) Progress reports due before January 31, 2025. The difference between current visibility conditions for the most impaired and least impaired days and baseline visibility conditions.

(B) Progress reports due on and after January 31, 2025. The difference between current visibility conditions for the most impaired and clearest days and baseline visibility conditions.

(iii)(A) Progress reports due before January 31, 2025. The change in visibility impairment for the most impaired and least impaired days over the period since the period addressed in the most recent plan required under paragraph (f) of this section.

(B) Progress reports due on and after January 31, 2025. The change in visibility impairment for the most impaired and clearest days over the period since the period addressed in the most recent plan required under paragraph (f) of this section.

(4) An analysis tracking the change over the period since the period addressed in the most recent plan required under paragraph (f) of this section in emissions of pollutants contributing to visibility impairment from all sources and activities within the State. Emissions changes should be identified by type of source or activity. With respect to all sources and activities, the analysis must extend at least through the most recent year for which the state has submitted emission inventory information to the Administrator in compliance with the triennial reporting requirements of subpart A of this part as of a date 6 months preceding the required date of the progress report. With respect to sources that report directly to a centralized emissions data system operated by the Administrator, the analysis must extend through the most recent year for which the Administrator has provided a State-level summary of such reported data or an internet-based tool by which the State may obtain such a summary as of a date 6 months preceding the required date of the progress report. The State is not required to backcast previously reported emissions to be consistent with more recent emissions estimation procedures, and may draw attention to actual or possible inconsistencies created by changes in estimation procedures.

(5) An assessment of any significant changes in anthropogenic emissions within or outside the State that have occurred since the period addressed in the most recent plan required under paragraph (f) of this section including whether or not these changes in anthropogenic emissions were anticipated in that most recent plan and whether they have limited or impeded progress in reducing pollutant emissions and improving visibility.

(6) An assessment of whether the current implementation plan elements and strategies are sufficient to enable the State, or other States with mandatory Class I Federal areas affected by emissions from the State, to meet all established reasonable progress goals

for the period covered by the most recent plan required under paragraph (f) of this section.

(7) For progress reports for the first implementation period only, a review of the State's visibility monitoring strategy and any modifications to the strategy as necessary.

(8) For a state with a long-term strategy that includes a smoke management program for prescribed fires on wildland that conducts a periodic program assessment, a summary of the most recent periodic assessment of the smoke management program including conclusions if any that were reached in the assessment as to whether the program is meeting its goals regarding improving ecosystem health and reducing the damaging effects of catastrophic wildfires.

(h) *Determination of the adequacy of existing implementation plan.* At the same time the State is required to submit any progress report to EPA in accordance with paragraph (g) of this section, the State must also take one of the following actions based upon the information presented in the progress report:

(1) If the State determines that the existing implementation plan requires no further substantive revision at this time in order to achieve established goals for visibility improvement and emissions reductions, the State must provide to the Administrator a declaration that revision of the existing implementation plan is not needed at this time.

(2) If the State determines that the implementation plan is or may be inadequate to ensure reasonable progress due to emissions from sources in another State(s) which participated in a regional planning process, the State must provide notification to the Administrator and to the other State(s) which participated in the regional planning process with the States. The State must also collaborate with the other State(s) through the regional planning process for the purpose of developing additional strategies to address the plan's deficiencies.

(3) Where the State determines that the implementation plan is or may be inadequate to ensure reasonable progress due to emissions from sources in another country, the State shall provide notification, along with available information, to the Administrator.

(4) Where the State determines that the implementation plan is or may be inadequate to ensure reasonable progress due to emissions from sources within the State, the State shall revise its implementation plan to address the plan's deficiencies within one year.

(i) *What are the requirements for State and Federal Land Manager coordination?* (1) By November 29, 1999, the State must identify in writing to the Federal Land Managers the title of the official to which the Federal Land Manager of any mandatory Class I Federal area can submit any recommendations on the implementation of this subpart including, but not limited to:

(i) Identification of impairment of visibility in any mandatory Class I Federal area(s); and

(ii) Identification of elements for inclusion in the visibility monitoring strategy required by § 51.305 and this section.

(2) The State must provide the Federal Land Manager with an opportunity for consultation, in person at a point early enough in the State's policy analyses of its long-term strategy emission reduction obligation so that information and recommendations provided by the Federal Land Manager can meaningfully inform the State's decisions on the long-term strategy. The opportunity for consultation will be deemed to have been early enough if the consultation has taken place at least 120 days prior to holding any public hearing or other public comment opportunity on an implementation plan (or plan revision) for regional haze required by this subpart. The opportunity for consultation on an implementation plan (or plan revision) or on a progress report must be provided no less than 60 days prior to said public hearing or public comment opportunity. This consultation must include the opportunity for the affected Federal Land Managers to discuss their:

(i) Assessment of impairment of visibility in any mandatory Class I Federal area; and

(ii) Recommendations on the development and implementation of strategies to address visibility impairment.

(3) In developing any implementation plan (or plan revision) or progress report, the State must include a description of how it addressed any comments provided by the Federal Land Managers.

(4) The plan (or plan revision) must provide procedures for continuing consultation between the State and Federal Land Manager on the implementation of the visibility protection program required by this subpart, including development and review of implementation plan revisions and progress reports, and on the implementation of other programs having the potential to contribute to impairment of visibility in mandatory Class I Federal areas.

[64 FR 35765, July 1, 1999, as amended at 70 FR 39156, July 6, 2005; 71 FR 60631, Oct. 13, 2006; 77 FR 33656, June 7, 2012; 82 FR 3124, Jan. 10, 2017]

§51.309 Requirements related to the Grand Canyon Visibility Transport Commission.

(a) What is the purpose of this section? This section establishes the requirements for the first regional haze implementation plan to address regional haze visibility impairment in the 16 Class I areas covered by the Grand Canyon Visibility Transport Commission Report. For the period through 2018, certain States (defined in paragraph (b) of this section as Transport Region States) may choose to implement the Commission's recommendations within the framework of the national regional haze program and applicable requirements of the Act by complying with the provisions of this section. If a Transport Region State submits an implementation plan which is approved by EPA as meeting the requirements of this section, it will be deemed to comply with the requirements for reasonable progress with respect to the 16 Class I areas for the period from approval of the plan through 2018. Any Transport Region State electing not to submit an implementation plan under this section is subject to the requirements of §51.308 in the same manner and to the same extent as any State not included within the Transport Region. Except as provided in paragraph (g) of this section, each Transport Region State is also subject to the requirements of §51.308 with respect to any other Federal mandatory Class I areas within the State or affected by emissions from the State.

(b) *Definitions.* For the purposes of this section:

(1) *16 Class I areas* means the following mandatory Class I Federal areas on the Colorado Plateau: Grand Canyon National Park, Sycamore Canyon Wilderness, Petrified Forest National Park, Mount Baldy Wilderness, San Pedro Parks Wilderness, Mesa Verde National Park, Weminuche Wilderness, Black Canyon of the Gunnison Wilderness, West Elk Wilderness, Maroon Bells Wilderness, Flat Tops Wilderness, Arches National Park, Canyonlands National Park, Capital Reef National Park, Bryce Canyon National Park, and Zion National Park.

(2) *Transport Region State* means one of the States that is included within the Transport Region addressed by the Grand Canyon Visibility Transport Commission (Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming).

(3) *Commission Report* means the report of the Grand Canyon Visibility Transport Commission entitled "Recommendations for Improving Western Vistas," dated June 10, 1996.

(4) *Fire* means wildfire, wildland fire, prescribed fire, and agricultural burning conducted and occurring on Federal, State, and private wildlands and farmlands.

(5) Milestone means the maximum level of annual regional SO_2 emissions, in tons per year, for a given year, assessed annually, through the year 2018, consistent with paragraph (d)(4) of this section.

(6) *Continuous decline in total mobile source emissions* means that the projected level of emissions from mobile sources of each listed pollutant in 2008, 2013, and 2018, are less than the projected level of emissions from mobile sources of each listed pollutant for the previous period (*i.e.*, 2008 less than 2003; 2013 less than 2008; and 2018 less than 2013).

(7) Base year means the year for which data for a source included within

the program were used by the WRAP to calculate emissions as a starting point for development of the milestone required by paragraph (d)(4)(i) of this section.

(8)–(12) [Reserved]

(13) *Eligible renewable energy resource,* for purposes of 40 CFR 51.309, means electricity generated by non-nuclear and non-fossil low or no air emission technologies.

(c) Implementation Plan Schedule. Each Transport Region State electing to submit an implementation plan under this section must submit such a plan no later than December 17, 2007. Indian Tribes may submit implementation plans after this deadline.

(d) *Requirements of the first implementation plan for States electing to adopt all of the recommendations of the Commission Report.* Except as provided for in paragraph (e) of this section, each Transport Region State must submit an implementation plan that meets the following requirements:

(1) *Time period covered.* The implementation plan must be effective through December 31, 2018 and continue in effect until an implementation plan revision is approved by EPA in accordance with § 51.308(f).

(2) *Projection of visibility improvement.* For each of the 16 mandatory Class I areas located within the Transport Region State, the plan must include a projection of the improvement in visibility conditions (expressed in deciviews, and in any additional ambient visibility metrics deemed appropriate by the State) expected through the year 2018 for the most impaired and least impaired days, based on the implementation of all measures as required in the Commission report and the provisions in this section. The projection must be made in consultation with other Transport Region States with sources which may be reasonably anticipated to contribute to visibility impairment in the relevant Class I area. The projection may be based on a satisfactory regional analysis.

(3) *Treatment of clean-air corridors.* The plan must describe and provide for implementation of comprehensive emission tracking strategies for clean-air corridors to ensure that the visibility does not degrade on the least-impaired days at any of the 16 Class I areas. The strategy must include:

(i) An identification of clean-air corridors. The EPA will evaluate the State's identification of such corridors based upon the reports of the Commission's Meteorology Subcommittee and any future updates by a successor organization;

(ii) Within areas that are clean-air corridors, an identification of patterns of growth or specific sites of growth that could cause, or are causing, significant emissions increases that could have, or are having, visibility impairment at one or more of the 16 Class I areas.

(iii) In areas outside of clean-air corridors, an identification of significant emissions growth that could begin, or is beginning, to impair the quality of air in the corridor and thereby lead to visibility degradation for the least-impaired days in one or more of the 16 Class I areas.

(iv) If impairment of air quality in clean air corridors is identified pursuant to paragraphs (d)(3)(ii) and (iii) of this section, an analysis of the effects of increased emissions, including provisions for the identification of the need for additional emission reductions measures, and implementation of the additional measures where necessary.

(v) A determination of whether other clean air corridors exist for any of the 16 Class I areas. For any such clean air corridors, an identification of the necessary measures to protect against future degradation of air quality in any of the 16 Class I areas.

(4) *Implementation of stationary source reductions.* The first implementation plan submission must include:

(i) Provisions for stationary source emissions of SO_2. The plan submission must include a SO_2 program that contains quantitative emissions milestones for stationary source SO_2 emissions for each year through 2018. After the first two years of the program, compliance with the annual milestones may be measured by comparing a three-year rolling average of actual emissions with a rolling average of the emissions milestones for the same three years. During the first two years of the program, compliance with the milestones may be measured by a

methodology of the States' choosing, so long as all States in the program use the same methodology. Compliance with the 2018 milestone shall be measured by comparing actual emissions from the year 2018 with the 2018 milestone. The milestones must provide for steady and continuing emissions reductions through 2018 consistent with the Commission's definition of reasonable progress, its goal of 50 to 70 percent reduction in SO_2 emissions from 1990 actual emission levels by 2040, applicable requirements under the CAA, and the timing of implementation plan assessments of progress and identification of any deficiencies which will be due in the years 2013 and 2018. The milestones must be shown to provide for greater reasonable progress than would be achieved by application of BART pursuant to § 51.308(e)(2).

(ii) Documentation of emissions calculation methods for SO_2. The plan submission must include documentation of the specific methodology used to calculate SO_2 emissions during the base year for each emitting unit included in the program. The implementation plan must also provide for documentation of any change to the specific methodology used to calculate emissions at any emitting unit for any year after the base year.

(iii) Monitoring, recordkeeping, and reporting of SO_2 emissions. The plan submission must include provisions requiring the monitoring, recordkeeping, and annual reporting of actual stationary source SO_2 emissions within the State. The monitoring, recordkeeping, and reporting data must be sufficient to determine annually whether the milestone for each year through 2018 is achieved. The plan submission must provide for reporting of these data by the State to the Administrator and to the regional planning organization. The plan must provide for retention of records for at least 10 years from the establishment of the record.

(iv) Criteria and Procedures for a Market Trading Program. The plan must include the criteria and procedures for conducting an annual evaluation of whether the milestone is achieved and, in accordance with paragraph (d)(4)(v) of this section, for activating a market trading program in the event the milestone is not achieved. A draft of the annual report evaluating whether the milestone for each year is achieved shall be completed no later than 12 months from the end of each milestone year. The plan must also provide for assessments of the program in the years 2013 and 2018.

(v) *Market trading program.* The implementation plan must include requirements for a market trading program to be implemented in the event that a milestone is not achieved. The plan shall require that the market trading program be activated beginning no later than 15 months after the end of the first year in which the milestone is not achieved. The plan shall also require that sources comply, as soon as practicable, with the requirement to hold allowances covering their emissions. Such market trading program must be sufficient to achieve the milestones in paragraph (d)(4)(i) of this section, and must be consistent with the elements for such programs outlined in § 51.308(e)(2)(vi). Such a program may include a geographic enhancement to the program to address the requirement under § 51.302(b) related to reasonably attributable impairment from the pollutants covered under the program.

(vi) Provision for the 2018 milestone.

(A) Unless and until a revised implementation plan is submitted in accordance with § 51.308(f) and approved by EPA, the implementation plan shall prohibit emissions from covered stationary sources in any year beginning in 2018 that exceed the year 2018 milestone. In no event shall a market-based program approved under § 51.308(f) allow an emissions cap for SO_2 that is less stringent than the 2018 milestone, unless the milestones are replaced by a different program approved by EPA as meeting the BART and reasonable progress requirements established in § 51.308.

(B) The implementation plan must provide a framework, including financial penalties for excess emissions based on the 2018 milestone, sufficient to ensure that the 2018 milestone will be met even if the implementation of

the market trading program in paragraph (d)(4)(v) of this section has not yet been triggered, or the source allowance compliance provision of the trading program is not yet in effect.

(vii) Provisions for stationary source emissions of NO_X and PM. The implementation plan must contain any necessary long term strategies and BART requirements for stationary source PM and NO_X emissions. Any such BART provisions may be submitted pursuant to either § 51.308(e)(1) or '51.308(e)(2).

(5) *Mobile sources.* The plan submission must provide for:

(i) Statewide inventories of onroad and nonroad mobile source emissions of VOC, NO_X, SO_2, $PM_{2.5}$, elemental carbon, and organic carbon for the years 2003, 2008, 2013, and 2018.

(A) The inventories must demonstrate a continuous decline in total mobile source emissions (onroad plus nonroad; tailpipe and evaporative) of VOC, NO_X, $PM_{2.5}$, elemental carbon, and organic carbon, evaluated separately. If the inventories show a continuous decline in total mobile source emissions of each of these pollutants over the period 2003–2018, no further action is required as part of this plan to address mobile source emissions of these pollutants. If the inventories do not show a continuous decline in mobile source emissions of one or more of these pollutants over the period 2003–2018, the plan submission must provide for an implementation plan revision by no later than December 31, 2008 containing any necessary long-term strategies to achieve a continuous decline in total mobile source emissions of the pollutant(s), to the extent practicable, considering economic and technological reasonableness and federal preemption of vehicle standards and fuel standards under title II of the CAA.

(B) The plan submission must also provide for an implementation plan revision by no later than December 31, 2008 containing any long-term strategies necessary to reduce emissions of SO_2 from nonroad mobile sources, consistent with the goal of reasonable progress. In assessing the need for such long-term strategies, the State may consider emissions reductions achieved or anticipated from any new Federal standards for sulfur in nonroad diesel fuel.

(ii) Interim reports to EPA and the public in years 2003, 2008, 2013, and 2018 on the implementation status of the regional and local strategies recommended by the Commission Report to address mobile source emissions.

(6) *Programs related to fire.* The plan must provide for:

(i) Documentation that all Federal, State, and private prescribed fire programs within the State evaluate and address the degree visibility impairment from smoke in their planning and application. In addition the plan must include smoke management programs that include all necessary components including, but not limited to, actions to minimize emissions, evaluation of smoke dispersion, alternatives to fire, public notification, air quality monitoring, surveillance and enforcement, and program evaluation.

(ii) A statewide inventory and emissions tracking system (spatial and temporal) of VOC, NO_X, elemental and organic carbon, and fine particle emissions from fire. In reporting and tracking emissions from fire from within the State, States may use information from regional data-gathering and tracking initiatives.

(iii) Identification and removal wherever feasible of any administrative barriers to the use of alternatives to burning in Federal, State, and private prescribed fire programs within the State.

(iv) Enhanced smoke management programs for fire that consider visibility effects, not only health and nuisance objectives, and that are based on the criteria of efficiency, economics, law, emission reduction opportunities, land management objectives, and reduction of visibility impact.

(v) Establishment of annual emission goals for fire, excluding wildfire, that will minimize emission increases from fire to the maximum extent feasible and that are established in cooperation with States, tribes, Federal land management agencies, and private entities.

(7) *Area sources of dust emissions from paved and unpaved roads.* The plan must include an assessment of the impact of dust emissions from paved and unpaved roads on visibility conditions in the 16 Class I Areas. If such dust

emissions are determined to be a significant contributor to visibility impairment in the 16 Class I areas, the State must implement emissions management strategies to address the impact as necessary and appropriate.

(8) *Pollution prevention.* The plan must provide for:

(i) An initial summary of all pollution prevention programs currently in place, an inventory of all renewable energy generation capacity and production in use, or planned as of the year 2002 (expressed in megawatts and megawatt-hours), the total energy generation capacity and production for the State, the percent of the total that is renewable energy, and the State's anticipated contribution toward the renewable energy goals for 2005 and 2015, as provided in paragraph (d)(8)(vi) of this section.

(ii) Programs to provide incentives that reward efforts that go beyond compliance and/or achieve early compliance with air-pollution related requirements.

(iii) Programs to preserve and expand energy conservation efforts.

(iv) The identification of specific areas where renewable energy has the potential to supply power where it is now lacking and where renewable energy is most cost-effective.

(v) Projections of the short- and long-term emissions reductions, visibility improvements, cost savings, and secondary benefits associated with the renewable energy goals, energy efficiency and pollution prevention activities.

(vi) A description of the programs relied on to achieve the State's contribution toward the Commission's goal that renewable energy will comprise 10 percent of the regional power needs by 2005 and 20 percent by 2015, and a demonstration of the progress toward achievement of the renewable energy goals in the years 2003, 2008, 2013, and 2018. This description must include documentation of the potential for renewable energy resources, the percentage of renewable energy associated with new power generation projects implemented or planned, and the renewable energy generation capacity and production in use and planned in the State. To the extent that it is not feasible for a State to meet its contribution to the regional renewable energy goals, the State must identify in the progress reports the measures implemented to achieve its contribution and explain why meeting the State's contribution was not feasible.

(9) *Implementation of additional recommendations.* The plan must provide for implementation of all other recommendations in the Commission report that can be practicably included as enforceable emission limits, schedules of compliance, or other enforceable measures (including economic incentives) to make reasonable progress toward remedying existing and preventing future regional haze in the 16 Class I areas. The State must provide a report to EPA and the public in 2003, 2008, 2013, and 2018 on the progress toward developing and implementing policy or strategy options recommended in the Commission Report.

(10) *Periodic implementation plan revisions and progress reports.* Each Transport Region State must submit to the Administrator periodic reports in the years 2013 and as specified for subsequent progress reports in §51.308(g). The progress report due in 2013 must be in the form of an implementation plan revision that complies with the procedural requirements of §§51.102 and 51.103.

(i) The report due in 2013 will assess the area for reasonable progress as provided in this section for mandatory Class I Federal area(s) located within the State and for mandatory Class I Federal area(s) located outside the State that may be affected by emissions from within the State. This demonstration may be based on assessments conducted by the States and/or a regional planning body. The progress report due in 2013 must contain at a minimum the following elements:

(A) A description of the status of implementation of all measures included in the implementation plan for achieving reasonable progress goals for mandatory Class I Federal areas both within and outside the State.

(B) A summary of the emissions reductions achieved throughout the State through implementation of the measures described in paragraph (d)(10)(i)(A) of this section.

(C) For each mandatory Class I Federal area within the State, an assessment of the following: the current visibility conditions for the most impaired and least impaired days; the difference between current visibility conditions for the most impaired and least impaired days and baseline visibility conditions; the change in visibility impairment for the most impaired and least impaired days over the past 5 years.

(D) An analysis tracking the change over the past 5 years in emissions of pollutants contributing to visibility impairment from all sources and activities within the State. Emissions changes should be identified by type of source or activity. The analysis must be based on the most recent updated emissions inventory, with estimates projected forward as necessary and appropriate, to account for emissions changes during the applicable 5-year period.

(E) An assessment of any significant changes in anthropogenic emissions within or outside the State that have occurred over the past 5 years that have limited or impeded progress in reducing pollutant emissions and improving visibility.

(F) An assessment of whether the current implementation plan elements and strategies are sufficient to enable the State, or other States with mandatory Federal Class I areas affected by emissions from the State, to meet all established reasonable progress goals.

(G) A review of the State's visibility monitoring strategy and any modifications to the strategy as necessary.

(ii) At the same time the State is required to submit the 5-year progress report due in 2013 to EPA in accordance with paragraph (d)(10)(i) of this section, the State must also take one of the following actions based upon the information presented in the progress report:

(A) If the State determines that the existing implementation plan requires no further substantive revision at this time in order to achieve established goals for visibility improvement and emissions reductions, the State must provide to the Administrator a negative declaration that further revision of the existing implementation plan is not needed at this time.

(B) If the State determines that the implementation plan is or may be inadequate to ensure reasonable progress due to emissions from sources in another State(s) which participated in a regional planning process, the State must provide notification to the Administrator and to the other State(s) which participated in the regional planning process with the States. The State must also collaborate with the other State(s) through the regional planning process for the purpose of developing additional strategies to address the plan's deficiencies.

(C) Where the State determines that the implementation plan is or may be inadequate to ensure reasonable progress due to emissions from sources in another country, the State shall provide notification, along with available information, to the Administrator.

(D) Where the State determines that the implementation plan is or may be inadequate to ensure reasonable progress due to emissions from within the State, the State shall develop additional strategies to address the plan deficiencies and revise the implementation plan no later than one year from the date that the progress report was due.

(iii) The requirements of § 51.308(g) regarding requirements for periodic reports describing progress towards the reasonable progress goals apply to States submitting plans under this section, with respect to subsequent progress reports due after 2013.

(iv) The requirements of § 51.308(h) regarding determinations of the adequacy of existing implementation plans apply to States submitting plans under this section, with respect to subsequent progress reports due after 2013.

(11) *State planning and interstate coordination.* In complying with the requirements of this section, States may include emission reductions strategies that are based on coordinated implementation with other States. Examples of these strategies include economic incentive programs and transboundary emissions trading programs. The implementation plan must include documentation of the technical and policy

basis for the individual State apportionment (or the procedures for apportionment throughout the trans-boundary region), the contribution addressed by the State's plan, how it coordinates with other State plans, and compliance with any other appropriate implementation plan approvability criteria. States may rely on the relevant technical, policy and other analyses developed by a regional entity (such as the Western Regional Air Partnership) in providing such documentation. Conversely, States may elect to develop their own programs without relying on work products from a regional entity.

(12) *Tribal implementation.* Consistent with 40 CFR Part 49, tribes within the Transport Region may implement the required visibility programs for the 16 Class I areas, in the same manner as States, regardless of whether such tribes have participated as members of a visibility transport commission.

(e) *States electing not to implement the commission recommendations.* Any Transport Region State may elect not to implement the Commission recommendations set forth in paragraph (d) of this section. Such States are required to comply with the timelines and requirements of §51.308. Any Transport Region State electing not to implement the Commission recommendations must advise the other States in the Transport Region of the nature of the program and the effect of the program on visibility-impairing emissions, so that other States can take this information into account in developing programs under this section.

(f) [Reserved]

(g) Additional Class I areas. Each Transport Region State implementing the provisions of this section as the basis for demonstrating reasonable progress for mandatory Class I Federal areas other than the 16 Class I areas must include the following provisions in its implementation plan. If a Transport Region State submits an implementation plan which is approved by EPA as meeting the requirements of this section, it will be deemed to comply with the requirements for reasonable progress for the period from approval of the plan to 2018.

(1) A demonstration of expected visibility conditions for the most impaired and least impaired days at the additional mandatory Class I Federal area(s) based on emissions projections from the long-term strategies in the implementation plan. This demonstration may be based on assessments conducted by the States and/or a regional planning body.

(2) Provisions establishing reasonable progress goals and implementing any additional measures necessary to demonstrate reasonable progress for the additional mandatory Federal Class I areas. These provisions must comply with the provisions of §51.308(d)(1) through (4).

(i) In developing long-term strategies pursuant to §51.308(d)(3), the State may build upon the strategies implemented under paragraph (d) of this section, and take full credit for the visibility improvement achieved through these strategies.

(ii) The requirement under §51.308(e) related to Best Available Retrofit Technology for regional haze is deemed to be satisfied for pollutants addressed by the milestones and backstop trading program if, in establishing the emission reductions milestones under paragraph (d)(4) of this section, it is shown that greater reasonable progress will be achieved for these additional Class I areas than would be achieved through the application of source-specific BART emission limitations under §51.308(e)(1).

(iii) The Transport Region State may consider whether any strategies necessary to achieve the reasonable progress goals required by paragraph (g)(2) of this section are incompatible with the strategies implemented under paragraph (d) of this section to the extent the State adequately demonstrates that the incompatibility is related to the costs of the compliance, the time necessary for compliance, the energy and nonair quality environmental impacts of compliance, or the remaining useful life of any existing source subject to such requirements.

[64 FR 35769, July 1, 1999, as amended at 68 FR 33784, June 5, 2003; 68 FR 39846, July 3, 2003; 68 FR 61369, Oct. 28, 2003; 68 FR 71014, Dec. 22, 2003; 71 FR 60632, Oct. 13, 2006; 82 FR 3128, Jan. 10, 2017]

ings with respect to Goldman's motion to confirm the arbitration award.

NATIONAL PARKS CONSERVATION ASSOCIATION; Sierra Club; Clean Air Council, Petitioners

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.

*** Pennsylvania Department of Environmental Protection; Homer City Generation LP, Intervenors.**

***(Pursuant to Clerk Order dated 08/21/14).**

No. 14-3147.

United States Court of Appeals, Third Circuit.

Argued April 14, 2015.

Opinion Filed: Sept. 29, 2015.

Background: Environmental organizations filed petition pursuant to Clean Air Act (CAA) for review of United States Environmental Protection Agency's (EPA) approval of Pennsylvania's regional haze state implementation plan (SIP). State agency and power plant operator intervened.

Holdings: The Court of Appeals, Vanaskie, Circuit Judge, held that:

(1) petition challenge EPA's finding that emission trading programs established by its cross-state air pollution rule were better than best available retrofit technology (BART) or its decision to approve states' reliance on rule;

(2) Court of Appeals for District of Columbia had sole jurisdiction to review EPA's national rule;

(3) EPA's approval of SIP was arbitrary;

(4) state was not required to consider limits imposed by best available control technology (BACT), lowest achievable emission rate (LAER), or maximum achievable control technology (MACT) in conducting its BART analysis;

(5) state was not required to set threshold for cost-effectiveness of pollution controls available for each BART-eligible source; and

(6) EPA could not rely on conclusory assertions on issue of control costs or its own experience addressing cost estimates.

Petition granted in part and denied in part, and matter remanded.

1. Environmental Law ⇐683

Environmental organizations' petition challenging Environmental Protection Agency's (EPA) approval of Pennsylvania's regional haze state implementation plan (SIP) pursuant to Clean Air Act (CAA) was not appropriate vehicle to challenge EPA's finding that emission trading programs established by its cross-state air pollution rule were better than best available retrofit technology (BART) or its decision to approve states' reliance on rule, as both these determinations stemmed from final rule and separate rulemaking proceeding not presently before court. Clean Air Act, § 307(b)(1), 42 U.S.C.A. § 7607(b)(1).

2. Federal Courts ⇐3908

Court of Appeals for District of Columbia had sole jurisdiction to review Environmental Protection Agency's (EPA) national rule disapproving state implemen-

tation plans (SIP) submitted by 15 states to extent they relied on EPA's invalidated clean air interstate rule (CAIR) program to limit sulfur dioxide (SO2) and oxides of nitrogen (NOx) emissions. Clean Air Act, § 307(b)(1), 42 U.S.C.A. § 7607(b)(1).

3. Environmental Law ⇐264, 698

Environmental Protection Agency's (EPA) approval of Pennsylvania's regional haze state implementation plan (SIP) pursuant to Clean Air Act (CAA) was arbitrary, thus warranting remand for further proceedings, despite EPA's contention that state's analysis was largely proper, and that errors it committed did not affect reasonableness of state's decision not to require its best available retrofit technology (BART)-eligible sources to implement additional pollution controls, where EPA failed explain why SIP's conclusory listings of upgrades, enhancements, and replacements that it considered were acceptable, acknowledged that state failed to determine whether filterable emission limit at 13 plants actually represented BART for those facilities, excused errors in state's BART analysis as moot based on future events, failed to explain why it ignored flaws in state's use of improper metric when calculating cost-effectiveness of additional pollution controls, and admitted that state should have calculated cumulative visibility impact from its sources. Clean Air Act, § 169A, 42 U.S.C.A. § 7491; 40 C.F.R. §§ 51.301, 51.308(e).

4. Environmental Law ⇐264

State was not required to consider limits imposed by best available control technology (BACT), lowest achievable emission rate (LAER), or maximum achievable control technology (MACT) in conducting best available retrofit technology (BART) analysis in its regional haze state implementation plan (SIP) pursuant to Clean Air Act (CAA); BACT and LAER applied to new and newly modified sources, while BART governed pollution sources constructed before 1977, and BART guidelines permitted, but did not require, states to rely on stringent MACT standards. Clean Air Act, § 169A, 42 U.S.C.A. § 7491.

5. Environmental Law ⇐264

State was not required to set threshold for cost-effectiveness of pollution controls available for each source eligible for best available retrofit technology (BART) in its regional haze state implementation plan (SIP) pursuant to Clean Air Act (CAA). Clean Air Act, § 169A, 42 U.S.C.A. § 7491.

6. Environmental Law ⇐262

In articulating its rationale for approving state's regional haze state implementation plan (SIP) pursuant to Clean Air Act (CAA), Environmental Protection Agency (EPA) could not rely on conclusory assertions on issue of control costs or its own experience addressing cost estimates. Clean Air Act, § 169A, 42 U.S.C.A. § 7491.

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Before: AMBRO, VANASKIE, and SHWARTZ, Circuit Judges.

OPINION OF THE COURT

VANASKIE, Circuit Judge.

Section 169A of the Clean Air Act, 42 U.S.C. § 7491, and implementing regulations promulgated by the United States Environmental Protection Agency ("EPA") require states to evaluate the impact that emissions from certain sources of pollution within their borders have on atmospheric visibility in national parks and wilderness areas. After conducting this evaluation, the Commonwealth of Pennsylvania declined to require its sources to implement additional pollution controls because it concluded that the costs associated with the controls outweighed the limited visibility improvements they would produce. The Commonwealth's conclusions were set forth in its 2010 State Implementation Plan ("SIP"), which was approved by the EPA in 2014.

Alleging that the EPA's approval of Pennsylvania's SIP was arbitrary and capricious, the National Parks Conservation Association, Sierra Club, and Clean Air Council (collectively, "Conservation Groups") filed the petition for review presently before the Court. For the reasons that follow, we will grant the petition in part and deny it in part, and remand the matter to the EPA for further consideration.

I.

A. Statutory and Regulatory Framework

In 1970, Congress enacted the Clean Air Act, 42 U.S.C. §§ 7401–7671q, to address the increasing amount of air pollution created by the industrialization of the United States and the resulting threat to public health and welfare. Employing "cooperative federalism," the Clean Air Act gives both the federal government and the states responsibility for maintaining and improving air quality: "the federal government develops baseline standards that the states individually implement and enforce." *Bell v. Cheswick Generating Station*, 734 F.3d 188, 190 (3d Cir.2013) (citation and quotation marks omitted).

As originally enacted, the Clean Air Act "did not elaborate on the protection of *visibility* as an air-quality related value." *Chevron U.S.A., Inc. v. EPA*, 658 F.2d 271, 272 (5th Cir.1981) (emphasis added). In 1977, however, Congress added § 169A to the Clean Air Act "[i]n response to a growing awareness that visibility was rapidly deteriorating in many places, such as wilderness areas and national parks...." *Id.* With § 169A, Congress "established as a national goal the 'prevention of any future, and the remedying of any existing, impairment in visibility in mandatory class I areas which impairment results from man-made air pollution.'" *Am. Corn Growers Ass'n v. EPA*, 291 F.3d 1, 3 (D.C.Cir.2002) (per curiam) (quoting 42 U.S.C. § 7491(a)(1)). The protected "Class I areas" include certain national parks and wilderness areas under 42 U.S.C. § 7472(a).[1] "Visibility impairment" means

1. There are 156 Class I areas in the United States, including 47 national parks, 108 wilderness areas, and one international park. No Class I area is located within Pennsylvania's borders. 40 C.F.R. pt. 51, app. Y.; EPA, *List of 156 Mandatory Class I Federal Areas,*

both "reduction in visual range and atmospheric discoloration." *Id.* § 7491(g)(6).

In connection with § 169A, Congress directed the EPA to issue regulations to ensure "reasonable progress" toward the national goal of restoring visibility conditions to their natural state in Class I areas. *Id.* § 7491(a)(4). Congress dictated that the EPA's regulations require adoption of a State Implementation Plan ("SIP") by each state that has a Class I area within its borders or whose emissions "may reasonably be anticipated to cause or contribute to any impairment of visibility" in any Class I area. *Id.* § 7491(b)(2). Each SIP must include, *inter alia*, emission limits, compliance schedules, and a long-term strategy for meeting the national visibility goal. *Id.* In response to this statutory directive, the EPA promulgated the Regional Haze Rule in 1999. *Regional Haze Regulations*, 64 Fed.Reg. 35,714 (July 1, 1999).[2]

Section 169A and the Regional Haze Rule also require each SIP to include a determination of the best available retrofit technology ("BART") for certain major stationary sources of pollution that are reasonably anticipated to cause or contribute to visibility impairment in any Class I area. *North Dakota v. EPA*, 730 F.3d 750, 756 (8th Cir.2013) (citing 42 U.S.C. § 7491(b)(2)(A); 40 C.F.R. §§ 51.301, 51.308(e)). BART is defined as "an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by an existing stationary facility." 40 C.F.R. § 51.301.

To satisfy the BART requirements, a state's SIP must first identify all "BART-eligible" sources within its borders. Under the regulations, a stationary source of air pollution is BART-eligible if it: (1) was in existence on August 7, 1977, but not in operation prior to August 7, 1962; (2) fits within one of 26 identified categories; and (3) has the potential to emit annually at least 250 tons of any air pollutant. *Id.*

Next, a state's SIP must determine which of these BART-eligible sources are "subject to BART." A source is subject to BART if it "emits any air pollutant which may reasonably be anticipated to *cause* or *contribute* to any impairment of visibility in any mandatory Class I Federal area." *Id.* § 51.308(e)(1)(ii) (emphasis added). The EPA recommends that a state consider a source to "cause" visibility impairment if it is responsible for a change in visibility in a Class I area of at least 1.0 deciview.[3]

http://www.epa.gov/visibility/class1.html (last visited Aug. 26, 2015).

2. The EPA has explained the visibility impairment known as "regional haze" as follows:

> Regional haze is visibility impairment that is produced by a multitude of sources and activities which are located across a broad geographic area and emit fine particles ($PM_{2.5}$) (*e.g.*, sulfates, nitrates, organic carbon, elemental carbon, and soil dust) and their precursors (*e.g.*, sulfur dioxide (SO_2), nitrogen oxides (NO_X), and in some cases, ammonia (NH_3) and volatile organic compounds (VOC)). Fine particle precursors react in the atmosphere to form fine particulate matter, which impairs visibility by scattering and absorbing light. Visibility impairment reduces the clarity, color, and visible distance that one can see. $PM_{2.5}$ can also cause serious health effects and mortality in humans and contributes to environmental effects such as acid deposition and eutrophication.

Approval and Promulgation of Air Quality Implementation Plans; Commonwealth of Pennsylvania; Regional Haze State Implementation Plan, 77 Fed.Reg. 3,984, 3,985 (Jan. 26, 2012).

3. Changes in visibility are expressed in a standard unit of measurement known as the deciview. *See* 40 C.F.R. § 51.301 (stating that the deciview is "a measurement of visibility impairment" that is "derived from calculated light extinction, such that uniform changes in

Regional Haze Regulations and Guidelines for Best Available Retrofit Technology (BART) Determinations, 70 Fed.Reg. 39,104, 39,118 (July 6, 2005). The suggested threshold for determining whether a source "contributes" to visibility impairment at a level no higher than 0.5 deciviews. *Id.*

For each BART-eligible source that is subject to BART, the state must conduct a source-specific analysis to determine appropriate emission limitations. In so doing, states "weigh[ ] the following five factors: (1) 'the costs of compliance'; (2) 'the energy and non[-]air quality environmental impacts of compliance'; (3) 'any existing pollution control technology in use at the source'; (4) 'the remaining useful life of the source'; and (5) 'the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.'" *WildEarth Guardians v. EPA,* 759 F.3d 1064, 1068 (9th Cir.2014) (quoting 42 U.S.C. § 7491(g)(2); 40 C.F.R. pt. 51, app. Y).

To aid states in identifying BART-eligible sources and determining appropriate emission limitations, the EPA issued the BART Guidelines, 70 Fed.Reg. 39,156. *WildEarth Guardians,* 759 F.3d at 1068. The Guidelines, issued in 2005, provide states with a five-step process for making their source-specific BART determinations, and these five steps subsume the statutory considerations listed above. *Id.* at 1068–69 (citing 70 Fed.Reg. 39,127). Under the Guidelines, a state is to first identify all available retrofit control technologies. Second, technically infeasible options are eliminated. Third, the effectiveness of the remaining control techniques is assessed. Fourth, the impacts, including the cost of compliance, energy impacts, non-air quality impacts, and the remaining useful life of the facility, are evaluated. Finally, a state must estimate the visibility impacts at Class I areas. *Id.* at 1069 (citing 70 Fed.Reg. 39,164, 39,166). While states are required to use the Guidelines when making BART determinations for any fossil fuel-fired power plant with a total electricity generating capacity of 750 megawatts or more, the Guidelines are advisory for smaller BART-eligible sources. *Id.* (citing 42 U.S.C. § 7491(b)(2)(B); 40 C.F.R. § 51.308(e)(1)(ii)(B)).

As an alternative to conducting this source-specific analysis, states may instead implement another program if they can demonstrate it is "better-than-BART" at reducing emissions. Specifically, the regional haze regulations permit a state to "opt to implement or require participation in an emissions trading program or other alternative measure" if it can show that the program would result in "greater reasonable progress" toward the national goal of restoring natural visibility "than would be achieved through the installation and operation of BART." 40 C.F.R. § 51.308(e)(2). States participating in such programs do not have to conduct a source-specific BART analysis or compel pollution sources within their borders to install, operate, and maintain BART at their facilities. *Id.*

Regardless of whether a state conducts the source-specific BART analysis or follows the better-than-BART approach, it must ultimately submit its SIP to the EPA. The EPA, in turn, must review the SIP and determine whether it meets the requirements of the Clean Air Act. 42 U.S.C. § 7410(a)(1). The EPA is required to approve a SIP as a whole if it meets all

haziness correspond to uniform incremental changes in perception across the entire range of conditions, from pristine to highly impaired"). A higher deciview value corresponds with a greater level of visibility impairment.

the statutory requirements, and it may approve any portion of a SIP that meets the requirements. *Id.* at § 7410(k)(3). If a state fails to submit a SIP, submits an incomplete SIP, or submits a SIP that does not meet the statutory requirements, the EPA must enact its own Federal Implementation Plan ("FIP"), unless the state can provide a SIP that the EPA can approve within two years. *North Dakota*, 730 F.3d at 757 (citing 42 U.S.C. § 7410(c)).

B. Procedural Background

Pennsylvania submitted its regional haze SIP to the EPA in December 2010, identifying 34 BART-eligible sources of pollution within its borders. App. 43–171. These pollution sources—various power plants, mills, refineries, and other facilities around the state—emit visibility-impairing particulate matter ("PM") into the atmosphere, as well as the chemical precursors to PM, which include sulfur dioxide ("SO_2") and oxides of nitrogen ("NO_x"). Pennsylvania elected to treat each of these 34 BART-eligible sources as subject to BART,[4] and it opted to follow the five-step process outlined in the Guidelines for making source-specific BART determinations.[5] Pennsylvania, however, chose to follow the better-than-BART approach with respect to the eight fossil fuel electric generating stations with a capacity of 750 megawatts or more.

Thus, Pennsylvania conducted a source-specific BART analysis regarding the SO_2 and NO_x emissions of each source with an electricity generating capacity below 750 megawatts, but did not do so for the fossil fuel electric generating stations having a capacity of 750 megawatts or more. Pennsylvania noted that these sources participated in the "cap and trade" program[6] for SO_2 and NO_x emissions established by EPA Clean Air Interstate Rule ("CAIR"), 70 Fed.Reg. 25,162 (May 12, 2005), and concluded that the sources' participation in the cap and trade program was better than BART at reducing such emissions.

Ultimately, Pennsylvania's SIP found that requiring additional emission controls at any of the 34 BART-eligible sources would result in only minimal visibility improvement in affected Class I areas. Weighing this minimal improvement against the cost of implementing the controls, Pennsylvania concluded that additional controls were not warranted.

In January 2012, the EPA issued a proposed rule providing for a limited approval of Pennsylvania's SIP ("2012 Proposed Rule"). *Approval and Promulgation of Air Quality Implementation Plans; Commonwealth of Pennsylvania; Regional Haze State Implementation Plan*, 77 Fed. Reg. 3,984 (Jan. 26, 2012). The EPA concluded that Pennsylvania's BART analysis complied with the statutory requirements of the Clean Air Act and the regional haze

4. This practice ensures that a BART analysis is conducted for every BART-eligible source, even if the deciview impact from the source is not high enough that the source would be considered to "cause" or "contribute" to visibility impairment in any Class I area under 40 C.F.R. § 51.308(e)(1)(ii).

5. Pennsylvania was obligated to follow the Guidelines for each of the eight fossil fuel-fired power plants in the state that have electricity generating capacity of at least 750 megawatts, but the Guidelines were advisory for the remaining BART-eligible sources. *See* 42 U.S.C. § 7491(b)(2)(B); 40 C.F.R. § 51.308(e)(1)(ii)(B).

6. A cap and trade program is an environmental policy tool that involves setting a mandatory cap on emissions while providing pollution sources with flexibility as to how they comply with the cap. *See* EPA, *Cap and Trade*, http://www.epa.gov/captrade (last visited Aug. 26, 2015).

regulations. However, the EPA declined to address Pennsylvania's reliance on the better-than-BART CAIR program regarding SO2 and NOx emissions for certain pollution sources, noting that particular issue was the subject of a separate rulemaking proceeding. The EPA also announced a one-month period for interested parties to comment on the 2012 Proposed Rule.

On June 7, 2012, the EPA issued its final rule (the "National Rule") in the separate proceeding referenced by the 2012 Proposed Rule, disapproving the SIPs submitted by Pennsylvania and 14 other states to the extent they relied on the CAIR program to limit SO2 and NOx emissions. *Regional Haze: Revisions to Provisions Governing Alternatives to Source–Specific Best Available Retrofit Technology (BART) Determinations, Limited SIP Disapprovals, and Federal Implementation Plans,* 77 Fed.Reg. 33,642 (June 7, 2012). With this disapproval, the EPA also promulgated FIPs for 13 of the states (including Pennsylvania), effectively replacing the states' reliance on the CAIR program with reliance on the newly promulgated Cross–State Air Pollution Rule, better known as the Transport Rule. By issuing the National Rule, the EPA also finalized its conclusion that the Transport Rule was better-than-BART at reducing SO_2 and NO_x emissions, and that it addressed the shortcomings of the CAIR program previously identified by the United States Court of Appeals for the District of Columbia Circuit.[7]

Shortly thereafter, on July 13, 2012, the EPA finalized its limited approval of Pennsylvania's SIP. *Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Regional Haze State Implementation Plan,* 77 Fed.Reg. 41,279 (July 13, 2012). With this "2012 Final Rule," the EPA responded to comments regarding the 2012 Proposed Rule and reaffirmed its conclusion that Pennsylvania's BART analysis was proper.

In response to the 2012 Final Rule, the Conservation Groups filed a petition for review with this Court, challenging the rule on a number of fronts. *Nat'l Parks Conservation Assoc. v. EPA,* No. 12–3534. We did not reach the merits of the petition, though, since the EPA filed a motion for voluntary remand without vacatur in order to consider and respond in greater detail to the Conservation Groups' concerns. We granted the motion on October 22, 2013, and remanded the matter to the EPA.

Following remand, the EPA entered a final rule on April 30, 2014 ("2014 Final Rule"), reissuing its limited approval of Pennsylvania's SIP. *Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Regional Haze State Implementation Plan,* 79 Fed.Reg. 24,340 (Apr. 30, 2014). With this rule, the EPA expanded its responses to certain comments and acknowledged numerous deficiencies in Pennsylvania's source-specific BART analysis. In the end, however, the EPA approved the SIP, finding that

7. The EPA initially promulgated CAIR in 2005, but the D.C. Circuit vacated the rule in 2008, noting multiple fatal flaws not pertinent to the present case. *North Carolina v. EPA,* 531 F.3d 896, 921 (D.C.Cir.2008) (per curiam). On rehearing, the D.C. Circuit elected to leave CAIR in place while the EPA crafted a new program to address CAIR's deficiencies. *North Carolina v. EPA,* 550 F.3d 1176, 1178 (D.C.Cir.2008) (per curiam). EPA responded by promulgating the Transfer Rule. The D.C. Circuit vacated this rule in 2012, *EME Homer City Generation, L.P. v. EPA,* 696 F.3d 7, 37 (D.C.Cir.2012), but the Supreme Court later overturned the decision, upheld the Transport Rule, and remanded for further proceedings. *EPA v. EME Homer City Generation, L.P.,* — U.S. —, 134 S.Ct. 1584, 1609–10, 188 L.Ed.2d 775 (2014).

Pennsylvania reasonably concluded that no additional pollution controls were required at the 34 BART-eligible sources given the low visibility impact of the sources in Class I areas and the high cost of implementing the controls.

This petition for review followed, with the Conservation Groups alleging that the EPA arbitrarily and capriciously approved Pennsylvania's SIP. We subsequently granted motions to intervene filed by the Pennsylvania Department of Environmental Protection (the state agency responsible for drafting Pennsylvania's SIP) and Homer City Generation, L.P., a coal-fired power plant in Indiana County, Pennsylvania.

II.

Under § 307(b)(1) of the Clean Air Act, we have jurisdiction to review a final EPA action that is "locally or regionally applicable" within our Circuit. 42 U.S.C. § 7607(b)(1); *GenOn REMA, LLC v. EPA*, 722 F.3d 513, 519 (3d Cir.2013). However, a petition for review regarding any "nationally applicable regulations promulgated, or final action taken, by the Administrator [of the EPA] ... may be filed *only* in the United States Court of Appeals for the District of Columbia." 42 U.S.C. § 7607(b)(1) (emphasis added).

When reviewing a final EPA action, we must "determine whether it is 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.'" *GenOn REMA*, 722 F.3d at 525 (quoting 42 U.S.C. § 7607(d)(9)(A)). While this is a narrow and deferential standard of review, *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43, 103 S.Ct. 2856, 77 L.Ed.2d 443 (1983), we must nevertheless ensure that the EPA "examined the relevant data and articulated a satisfactory explanation for its action, including a rational connection between the facts found and the choice made." *Prometheus Radio Project v. FCC*, 373 F.3d 372, 389–90 (3d Cir.2004) (citation and quotation marks omitted).

III.

A. Transport Rule

The Conservation Groups challenge the EPA's decision to allow Pennsylvania to rely on the Transport Rule in lieu of conducting a source-specific BART analysis regarding SO2 and NOx emissions from each source with an electricity generating capacity of at least 750 megawatts. In particular, they argue that the Transport Rule is not better-than-BART at reducing SO_2 and NO_x emissions, has not been implemented as the EPA assumed it would be when it permitted Pennsylvania to rely on the rule, and is subject to further delays and legal challenges.

[1] The EPA counters that this appeal is not the appropriate vehicle to challenge its finding that the Transport Rule is better-than-BART or its decision to approve states' reliance on this rule, as both these determinations stem from a final rule and separate rulemaking proceeding not presently before this Court. Moreover, the EPA argues that under 42 U.S.C. § 7607(b)(1), the Conservation Groups must pursue any such challenge in the D.C. Circuit. We agree with the EPA on both points.

Following extensive administrative proceedings, the EPA issued its National Rule on June 7, 2012. 77 Fed.Reg. 33,642. With it, the EPA finalized the emissions-limiting Transport Rule, a replacement to the CAIR program that had been invalidated by the D.C. Circuit in *North Carolina v. EPA*, 531 F.3d 896, 921 (D.C.Cir. 2008) (per curiam). The National Rule included the finding that the emission trading programs established by the

Transport Rule are better-than-BART. 77 Fed.Reg. 33,643 ("In this action, the EPA is finalizing our finding that the trading programs in the Transport Rule ... achieve greater reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas than source-specific ... (BART) in those states covered by the Transport Rule."). The EPA also finalized its disapproval of the SIPs submitted by Pennsylvania and 14 other states to the extent they relied on the CAIR program to limit SO_2 and NO_x emissions, and promulgated FIPs for 13 states (including Pennsylvania), effectively replacing the states' reliance on the CAIR program with reliance on the newly promulgated Transfer Rule. *Id.*

By contrast, the 2014 Final Rule, which the Conservation Groups challenge here, does not address the merits of the Transport Rule or Pennsylvania's reliance on it. Instead, it notes those issues were addressed in a "separate but related action," referring to the National Rule. *See* 79 Fed. Reg. 24,340–41. Prior to issuing the 2014 Final Rule, the EPA repeatedly explained that the propriety of the Transport Rule, the CAIR program, and Pennsylvania's reliance on the Transport Rule or the CAIR program were beyond the scope of these rulemaking proceedings. *See, e.g.,* 2012 Final Rule, 77 Fed.Reg. 41,282 ("Comments related to [the Transport Rule] as an alternative to BART for [electricity generating units] are beyond the scope of this rulemaking. The EPA addressed similar comments concerning the Transport Rule as a BART alternative in [the National Rule]."); 2012 Proposed Rule, 77 Fed. Reg. 3,984 ("[W]e are not taking action in this notice to address the Commonwealth's reliance on CAIR to meet certain regional haze requirements.").

In short, the Conservation Groups seek to use this appeal from the administrative proceedings that culminated in the 2014 Final Rule to challenge decisions the EPA reached in separate proceedings. We find no support for this approach in the text of the Clean Air Act provision authorizing judicial review of EPA actions. *See* 42 U.S.C. § 7607(b)(1). Additionally, as the administrative record upon which these decisions were made is not before us, we lack the information necessary to evaluate the EPA's action regarding the Transport Rule. *See Fed. Power Comm'n v. Transcontinental Gas Pipe Line Corp.,* 423 U.S. 326, 331, 96 S.Ct. 579, 46 L.Ed.2d 533 (1976) (stating that "we have consistently expressed the view that ordinarily review of administrative decisions is to be confined to consideration of the decision of the agency ... and of the evidence on which it is based") (citation and quotation marks omitted). Accordingly, we cannot entertain the Conservation Groups' challenge to the Transport Rule.

[2] Moreover, even if the Conservation Groups could use this appeal to challenge the Transport Rule, we are not the proper court to hear the challenge. Under 42 U.S.C. § 7607(b)(1), petitions for review of "nationally applicable regulations promulgated, or final action taken, by the Administrator [of the EPA] ... may be filed *only* in the [D.C. Circuit]." *Id.* (emphasis added). We conclude that the EPA's National Rule, which finalized the Transport Rule (applicable to 28 states and the District of Columbia) and resulted in 13 FIPs permitting various states to rely on the Transport Rule, falls into this category. *See Texas v. EPA,* No. 10–60961, 2011 WL 710598, at *5 (5th Cir. Feb. 24, 2011) (unpublished) ("Our conclusion today—that an EPA action involving the SIPs of numerous far-flung states is 'nationally applicable' and thus reviewable only in the D.C. Circuit—is consistent with the holdings of our sister circuits to have considered the

question."); *W. Va. Chamber of Commerce v. Browner*, No. 98–1013, 1998 WL 827315, at *4 (4th Cir. Dec. 1, 1998) (unpublished) ("An EPA rule need not span 'from sea to shining sea' to be nationally applicable.") (footnote omitted); *Puerto Rican Cement Co. v. EPA*, 889 F.2d 292, 299–300 (1st Cir.1989) (finding EPA regulations to be "nationally applicable" where they applied to any SIP "that ha[d] 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," and the list of states governed by the regulations changed as SIPs were approved and disapproved by the EPA).[8]

Accordingly, we will deny the Conservation Groups' petition for review to the extent it challenges the Transport Rule or Pennsylvania's reliance on it.

B. Source–Specific BART Analysis

[3] The Conservation Groups also contend that Pennsylvania's source-specific BART analysis failed to comply with the Guidelines in many respects, and that the EPA violated the Clean Air Act by arbitrarily approving Pennsylvania's SIP despite these fatal flaws. The EPA counters that Pennsylvania's analysis was largely proper, and that the errors it committed did not affect the reasonableness of the state's decision not to require its BART-eligible sources to implement additional pollution controls. In what resembles a harmless-error argument, the EPA asserts that, despite Pennsylvania's flawed analysis, the resulting overall picture supported its ultimate decision. As discussed below, while we reject some of the arguments advanced by the Conservation Groups, we are nevertheless compelled to conclude that the EPA arbitrarily approved Pennsylvania's SIP given the multiple flaws in Pennsylvania's BART analysis and the EPA's insufficient explanation as to why it could overlook them.

1. Identification of All Available Retrofit Control Technologies

The Conservation Groups contend that Pennsylvania failed to satisfy the BART requirement of identifying all available pollution control technologies. In particular, they argue that the state did not consider upgrades to existing electrostatic precipitator ("ESP") control technologies for BART-eligible power plants within the state, or other available combinations of controls.

The EPA counters that Pennsylvania's SIP notes that ESP upgrades were considered for all but two power plants, and that Pennsylvania had declined to consider upgrades at those two facilities because they had recently installed "state-of-the-art" ESP controls. The EPA also argues that Pennsylvania did consider combinations of controls, including fabric filters on sources where technically feasible.

While we agree with the EPA that Pennsylvania's SIP states that upgrades and combinations were considered, we cannot discern from the administrative record the specifics of Pennsylvania's analysis or why it rejected certain upgrades or combinations. As the Conservation Groups noted in their comments to the 2012 Final Rule, App. 487, Pennsylvania's SIP states in conclusory fashion that ESP upgrades,

8. What's more, even the Conservation Groups appear to recognize that their challenge to the Transport Rule should be heard by the D.C. Circuit: the National Parks Conservation Association and Sierra Club are participants in consolidated appeals challenging the Transport Rule that are currently pending before the D.C. Circuit. *See Util. Air Regulatory Grp. v. EPA*, No. 12–1342 (D.C.Cir.).

enhancements, or replacements were considered for certain sources. *See, e.g.*, App. 221 (stating that "[t]he retrofit technologies reviewed" during the course of the BART analysis for the Mitchell Power Station "included fuel-related modifications, ESP upgrades, enhancements or replacement, replacement of the ESPs with fabric filters or compact hybrid particulate collectors"). What the SIP fails to do, however, is identify or describe the upgrades considered or explain why these controls were rejected. Similarly, the EPA has failed to explain—either in the 2014 Final Rule or now on appeal—how it could meaningfully evaluate Pennsylvania's analysis described in such conclusory fashion. We acknowledge that EPA and BART regulations do not require exhaustive analysis of every conceivable emissions control. *See* 40 C.F.R. pt. 51, app. Y § IV.D. n.12 (explaining that "[i]t is not necessary to list all permutations of available control levels that exist for a given technology"). Nonetheless, the EPA has failed to satisfactorily explain why the SIP's conclusory listings are acceptable.

2. Baseline Level for PM Emissions

The Conservation Groups next challenge Pennsylvania's source-specific BART analysis regarding PM emissions from 13 power plants. Specifically, they contend the state improperly concluded that the filterable emission limit of 0.1 pound of particulate matter per million British thermal units ("0.1 lb/MMBtu") represents BART for those facilities.[9] The Conservation Groups argue the limit is not sufficiently stringent, and note that lower limits (between 0.07 lb/MMBtu and 0.012 lb/MMBtu) have qualified as BART at other facilities. In short, they assert that Pennsylvania had no reasoned basis for selecting the emission limit that it did, and that the EPA arbitrarily approved Pennsylvania's BART analysis regarding PM emissions predicated on this threshold.

In the 2014 Final Rule, the EPA concedes that Pennsylvania failed to determine whether the 0.1 lb/MMBtu emission limit actually represents BART for those facilities. *See* 79 Fed.Reg. 24,344 ("Here, Pennsylvania determined that PM BART for most of the subject-to-BART [electricity generating units] was their existing permitted emission limits of 0.1 lb/MMBtu, which can be achieved by the existing [control technology]. While the EPA agrees with the commenter that Pennsylvania ideally should have examined whether 0.1 lb/MMBtu actually reflects the 'degree of reduction achievable' for the particular [control technology] at each facility, EPA thinks that Pennsylvania's failure to do so was not fatal in this instance....") (footnote omitted). The EPA excuses this failure for two reasons. First, it argues that Pennsylvania's error was essentially harmless, as imposing a stricter PM emission limit on these sources would have minimal visibility impact in Class I areas since the PM emissions from these sources were responsible for only a minimal portion of the visibility impairment in these areas. Second, the EPA claims that the issue is "largely moot[ ]." *Id.* at 24,345. Specifically, the agency notes that many of these 13 power plants have retired or put in motion plans to retire or convert to cleaner burning fuels since Pennsylvania conducted its

9. After a state has identified the best available control technology for reducing emissions at a particular source, it must then set an "emission limit." This limit represents the emission-reduction capabilities of the identified control technology. *See* 2014 Final Rule, 79 Fed.Reg. 24,344 (stating that "once a state has selected a control technology that represents BART, the state must then complete the BART analysis by selecting an emission limit that represents the emission-reduction capabilities of that control technology").

BART determinations. The EPA also notes that the remaining sources will have to comply with a more stringent PM emission limit of 0.03 lb/MMBtu by 2015 due to the implementation of the Mercury and Air Toxics Standards ("MATS") Rule. *Id.* at 24,344.

We find the EPA's arguments unconvincing. As discussed in greater detail *infra*, Part III.B.7, the EPA's claim of harmless error is unpersuasive since the agency has offered scant justification for this position, apart from its own assurances that the multiple flaws in Pennsylvania's analysis did not impact the reasonableness of its conclusions. Similarly, the EPA has not identified, nor have we located, any legal support for the EPA's contention that it may excuse errors in a state's BART analysis as moot based on events that are yet to transpire. To the contrary, the EPA has a statutory obligation to disapprove a SIP that does not comply with the Clean Air Act and to promulgate a FIP if the deficiencies are not timely cured. *See* 42 U.S.C. § 7410(k) (requiring the EPA to review SIPs to ensure compliance); *id.* § 7410(*l*) (prohibiting the EPA from approving a revision to a SIP if it would interfere with any applicable requirement of the Clean Air Act).

3. Alternative Pollution Control Limits: BACT, LAER, and MACT

The Conservation Groups also contend Pennsylvania's BART analysis regarding PM emissions did not comply with the Guidelines because the state did not consider more stringent emission limits developed as part of separate air quality permitting processes under the Clean Air Act. In particular, they argue that limits imposed by other programs-known as best available control technology ("BACT"), lowest achievable emission rate ("LAER"), and maximum achievable control technology ("MACT")-are relevant to the BART analysis because they demonstrate achievable emission reductions.[10]

In response, the EPA notes that the BART Guidelines do not require states to consider the exact *emission limits* determined to be BACT and LAER. Instead, they must consider the *technologies* used to achieve BACT and LAER when conducting the first step of the BART analysis: identifying all available control technologies for their pollution sources. *See* BART Guidelines, 40 C.F.R. pt. 51, app. Y ("*Technologies* required as BACT or LAER are available for BART purposes and must be included as control alternatives.") (emphasis added). Moreover, the

10. BACT is "an emission limitation based on the maximum degree of reduction of each pollutant ... which the permitting authority, on a case-by-case-basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for [the] facility...." 42 U.S.C. § 7479(3). Under the Clean Air Act's Prevention of Significant Deterioration program, no new major air pollutant emitting facility may be constructed unless the facility is equipped with BACT. *Alaska Dep't of Envtl. Conservation v. EPA*, 540 U.S. 461, 468, 124 S.Ct. 983, 157 L.Ed.2d 967 (2004). In "nonattainment areas"—areas that are not in attainment with the Clean Air Act's National Ambient Air Quality Standards—new and modified pollution sources are required to install LAER, which is more stringent than BACT. *See Citizens Against Ruining the Env't v. EPA*, 535 F.3d 670, 673 n. 3 (7th Cir.2008). Under the Clean Air Act's National Emission Standards for Hazardous Air Pollutants program, the EPA imposes MACT on major sources of certain hazardous air pollutants. MACT "must reflect 'the maximum degree of reduction in emissions' that the EPA determines is 'achievable,' taking into consideration 'the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements.'" *Nat'l Res. Def. Council v. EPA*, 749 F.3d 1055, 1057 (D.C.Cir.2014) (quoting 42 U.S.C. § 7412(d)(2)).

EPA notes that the stringent emission levels determined to be BACT or LAER are not necessarily achievable by BART-eligible sources because those programs apply to new and newly modified sources, while BART governs pollution sources constructed before 1977.

The EPA also notes that, for sources of PM emissions that are subject to MACT standards, the BART Guidelines permit—but do not require—states to rely on the stringent MACT standards for purposes of BART. In other words, the Guidelines create a presumption that a state's reliance on the MACT standards satisfies BART, but they do not require the state to rely on the MACT standard to satisfy BART. *See* BART Guidelines, 40 C.F.R. pt. 51, app. Y ("We believe that, in many cases, it will be unlikely that States will identify emission controls more stringent than the MACT standards without identifying control options that would cost many thousands of dollars per ton. Unless there are new technologies subsequent to [issuance of] the MACT standards which would lead to cost-effective increases in the level of control, you may rely on the MACT standards for purposes of BART.").

[4] We agree with the EPA's reading of the BART Guidelines on these points. As a result, we reject the Conservation Groups' contention that Pennsylvania improperly failed to consider BACT, LAER, and MACT emission limitations.

4. Cost–Effectiveness Threshold

The Conservation Groups argue that Pennsylvania failed to properly evaluate the cost-effectiveness of the pollution controls available for each BART-eligible source. In particular, they note that Pennsylvania did not set a "threshold" for cost-effectiveness—that is, an amount of money at which it would reject any available control option as too expensive. Absent such a threshold, the Conservation Groups contend, Pennsylvania had no principled way of determining when a pollution control was a cost-effective method of improving visibility in affected Class I areas.

The EPA asserts that nothing in the Clean Air Act requires Pennsylvania to set a fixed threshold of cost-effectiveness, and that the Guidelines make no mention of such a threshold in their instructions on how to evaluate cost-effectiveness. *See* BART Guidelines, 40 C.F.R. pt. 51, app. Y; *Nat'l Parks Conservation Ass'n v. EPA*, 788 F.3d 1134, 1142 (9th Cir.2015) ("To be sure, the Act and the Regulations do not specifically require that EPA explain its cost-effectiveness decisions through use of a 'bright line' rule."). Instead of drawing a line in the sand on cost-effectiveness, the EPA notes that Pennsylvania's SIP appropriately determined that pollution "sources with a higher degree of potential visibility improvement from control would justify higher cost controls," and that "only low cost controls would be justified for sources with a lower degree of potential visibility improvement." App. 100.

[5] Because we agree that Pennsylvania was not compelled to set a threshold for cost-effectiveness, we conclude that the EPA did not act arbitrarily by approving Pennsylvania's SIP absent such a threshold.

5. Cost–Effectiveness Metric

The Conservation Groups also assert that Pennsylvania used an improper metric when calculating the cost-effectiveness of additional pollution controls. Specifically, they argue that Pennsylvania evaluated the cost of controls based on the dollars-per-deciview metric rather than the dollars-per-ton metric required by the Guidelines.[11] The Conservation Groups contend

11. As its name implies, the dollars-per-ton metric is a measurement of the costs associat-

that Pennsylvania's use of the dollars-per-deciview metric distorted the true cost of pollution controls and led to the state's conclusion that additional pollution controls were not warranted at any of the BART-eligible sources.

In responding to this argument during the notice-and-comment period and now on appeal, the EPA has taken seemingly inconsistent positions. In the text of the 2014 Final Rule, the EPA states, without elaboration, that Pennsylvania's use of the dollars-per-deciview metric was "flawed." 2014 Final Rule, 79 Fed.Reg. 24,342 (stating that "EPA agrees with the commenters that Pennsylvania's reliance on the [dollars-per-deciview] metric was flawed for multiple reasons"). On appeal, however, the EPA responds that the Guidelines specify that cost-effectiveness calculations be expressed in terms of dollars-per-ton, but they do not forbid the consideration of the dollars-per-deciview metric as well.[12] The EPA also notes that Pennsylvania considered both metrics with respect to 33 of its 34 BART-eligible sources. Resp. Br. 46.

Our review of the EPA's decision is limited to the reasoning supplied in its final rule, not the justifications subsequently crafted and proffered by the agency's appellate counsel. *See Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 50, 103 S.Ct. 2856 ("It is well-established that an agency's action must be upheld, if at all, on the basis articulated by the agency itself.") (citations omitted); *Safe Air for Everyone v. EPA*, 488 F.3d 1088, 1091 (9th Cir.2007) (stating that "our review of an administrative agency's decision begins and ends with the reasoning that the agency relied upon in making that decision"). As a result, we are left with the EPA's conclusion that Pennsylvania's use of the dollars-per-deciview metric is "flawed" in multiple unidentified respects and no meaningful explanation as to why the EPA ignored these flaws. This rationale is insufficient to justify the EPA's approval of Pennsylvania's analysis of cost-effectiveness.

6. Cumulative Visibility Impact

As part of its source-specific BART analysis, Pennsylvania was required to calculate the visibility improvement that could be achieved in Class I areas by implementing additional pollution controls at its BART-eligible sources. The state's calculations for each source, however, took

ed with removing a ton of a particular pollutant from a source's emission. The dollars-per-deciview metric, by contrast, considers the costs associated with pollution reduction that would result in a 1.0 deciview visibility improvement. The dollars-per-ton metric is frequently abbreviated as "$/ton," while the dollars-per-deciview metric is abbreviated as "$/dv."

12. As the Tenth Circuit has noted, the Guidelines "permit the BART-determining authority to use dollar per deciview as an optional method of evaluating cost effectiveness." *Oklahoma v. EPA*, 723 F.3d 1201, 1221 (10th Cir.2013) (citing 40 C.F.R. pt. 51, app. Y(IV)(E)(1)). As to the issue of whether states are *required* to use the dollars-per-ton metric in evaluating cost-effectiveness, however, "[t]he guidelines themselves are a bit unclear." *Id.* at 1221 n. 13. The Tenth Circuit explains:

> In the section on cost effectiveness, the guidelines mention only the dollar-per-ton metric. 40 C.F.R. pt. 51 app. Y(IV)(D)(4)(c). However, the guidelines later state that, in evaluating alternatives, "we recommend you develop a chart (or charts) displaying for each of the alternatives" that includes, among other factors, the cost of compliance defined as "compliance—total annualized costs ($), cost effectiveness ($/ton), and incremental cost effectiveness ($/ton), *and/or* any other cost-effectiveness measures (such as $/deciview)." *Id.* app. Y(IV)(E)(1) (emphasis added).

Id.

into account only the potential impact such controls would have on the visibility in the Class I area *most severely impacted* by the source. Pennsylvania did not consider the "cumulative visibility impact"—that is, it did not calculate the total visibility improvement for *all* affected Class I areas that would result from installing additional controls at each source. As a result, the Conservation Groups argue, Pennsylvania underestimated the visibility impact of each source and, correspondingly, underestimated the cost-effectiveness of additional control technologies.

In the 2014 Final Rule, the EPA admits that Pennsylvania should have calculated the cumulative visibility impact from its sources. 79 Fed.Reg. 24,342 ("EPA also agrees with the commenters that, in considering the visibility improvement expected from the use of controls, Pennsylvania should have taken into account the visibility impacts at all impacted Class I areas rather than focusing solely on the benefits at the most impacted area."). The EPA contends this error, among others, was harmless, a contention we address below.

7. Harmless Error

To justify its approval of Pennsylvania's admittedly flawed BART analysis, the EPA advances a harmless error argument. In particular, the EPA contends it reasonably approved Pennsylvania's conclusion that pollution controls were not warranted as the overall picture that emerged from the state's analysis demonstrated that the improvement in visibility at affected Class I areas as a result of the controls would be minimal. Based on the administrative record before us, however, that conclusion is a bridge too far.

In the 2014 Final Rule, the EPA concedes that Pennsylvania's BART determinations contained "systemic deficiencies" and a "large number" of errors. 79 Fed. Reg. 24,341, 24,343 (quotation marks omitted). On a broad scale, the EPA acknowledges that Pennsylvania's SIP lacked necessary technical information and supporting documentation, and that it was insufficiently thorough. *Id.* at 24,342 (noting that "many of the comments criticizing Pennsylvania's BART determinations are correct," and that "the Pennsylvania regional haze SIP contains very limited information describing Pennsylvania's analyses and consideration of the BART factors"); *id.* (stating "Pennsylvania should have provided a more thorough and detailed analysis of costs and visibility impacts in its regional haze SIP"). More specifically, the EPA concedes that Pennsylvania erred at multiple steps of the BART analysis. For example, by failing to consider the cumulative visibility impact of each source, Pennsylvania understated the impact that pollution originating within its borders had on Class I areas beyond those borders. *Id.* ("EPA also agrees ... that ... Pennsylvania should have taken into account the visibility impacts at all impacted Class I areas rather than focusing solely on the benefits at the most impacted area."). The EPA also admits that Pennsylvania's cost-effectiveness calculations were flawed. *Id.* ("Similarly, EPA agrees with the commenters that Pennsylvania's reliance on the $/dv metric was flawed for multiple reasons."); *id.* (agreeing with the commenters "that many of the [pollution] controls under consideration [by Pennsylvania] were likely cost-effective measures," even though the state rejected them as too expensive).

Tellingly, the EPA concedes that these various failures impaired its ability to independently assess Pennsylvania's analysis. In the agency's own words, it has a duty under the Clean Air Act "to exercise independent technical judgment in evalu-

ating the adequacy of a state's regional haze SIP, including its BART determinations." *Approval, Disapproval and Promulgation of Implementation Plans; State of Wyoming; Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze,* 79 Fed.Reg. 5,032, 5,064 (Jan. 30, 2014). Here, however, with respect to the control technologies considered by Pennsylvania and the costs associated with those controls, the EPA concedes that "the cursory information available in the record does not allow for an assessment of how these numbers were derived or whether Pennsylvania's analyses were reasonably done." 2014 Final Rule, 79 Fed.Reg. 24,342. Regarding Pennsylvania's determination of potential visibility improvements in Class I areas, the EPA similarly notes that "it is difficult to assess the estimates of the improvements in visibility associated with various controls given the limited information in the SIP as to the assumptions relied on in the modeling and the summary nature of the results provided." Id. Likewise, regarding Pennsylvania's estimates of the costs of implementing certain pollution controls, the EPA laments: "Unfortunately, where controls were estimated to be more cost-effective, EPA cannot assess the extent to which Pennsylvania's analyses are reasonable estimates for purposes of making a BART determination." *Id.*

Despite the multitude of problems with Pennsylvania's SIP, and the EPA's admitted inability to adequately assess the state's analysis, the EPA asserts that "the information that Pennsylvania did provide" is sufficient to conclude "that Pennsylvania's ultimate BART determinations were nevertheless reasonable." *Id.* Without citation to supporting authorities or further explanation, the EPA broadly claims that, "based on the cost estimates for other BART sources in other states" it has reviewed, "Pennsylvania's cost numbers appear to be generally consistent for such controls...." *Id.* The EPA further concludes that "[w]here Pennsylvania estimated the costs of controls to be in the tens of thousands or hundreds of thousands of dollars per ton of pollutant removed, Pennsylvania's conclusions that such controls are not cost-effective seem reasonable, even assuming that the true cost[s] of controls are likely less than what Pennsylvania estimated." *Id.*

[6] As a reviewing court, we must ensure that the EPA "articulate[s] a satisfactory explanation" for its decision to approve Pennsylvania's SIP, "including a rational connection between the facts found and the choice made." *Prometheus Radio Project,* 373 F.3d at 389–90 (citation and quotation marks omitted). The EPA's conclusory assertions on the issue of control costs and its invocation of its own experience addressing cost estimates do not suffice. *See Natural Res. Def. Council, Inc. v. Hodel,* 865 F.2d 288, 298 (D.C.Cir.1988) (per curiam) ("[C]onclusory remarks ... do not equip a decisionmaker to make an informed decision about alternative courses of action or a court to review the [agency's] reasoning."); *see also Ass'n of Private Colleges & Univs. v. Duncan,* 870 F.Supp.2d 133, 154 (D.D.C.2012) ("That this explanation could be used to justify any [determination] at all demonstrates its arbitrariness."); *Nat'l Parks Conservation Ass'n,* 788 F.3d at 1145 (remanding where the "reasoning fails to reveal to a reader how EPA determined that the cost of controls were not justified").

The EPA also asserts that "[w]hen the other key BART factor—visibility—is taken into account, ... an overall picture emerges that supports Pennsylvania's BART determinations." 2014 Final Rule,

79 Fed.Reg. 24,342. In essence, the EPA contends that, given Pennsylvania's calculations showing that its BART-eligible sources had minimal visibility impact at Class I areas, it was reasonable to conclude that additional pollution controls were unwarranted.

We are unpersuaded by this reasoning. As noted above, the 2014 Final Rule repeatedly criticizes Pennsylvania's SIP calculations and supporting documentation, noting that the SIP is so lacking that it is difficult to assess the visibility impact calculations Pennsylvania did conduct. What the EPA could determine, however, was that Pennsylvania underestimated the impact of pollution from its sources because it failed to calculate the cumulative visibility impact from each source. The EPA now urges us to rely on these very same visibility impact calculations to conclude that the "overall picture" supports Pennsylvania's BART analysis. The EPA unconvincingly insists we rely on what it has said is flawed.[13]

In the end, the EPA has identified a host of problems with Pennsylvania's BART analysis. What it has not done, however, is provide a sufficient explanation as to why it overlooked these problems and approved Pennsylvania's SIP. Because we, as a reviewing court, need an agency to show its work before we can accept its conclusions, we will remand this case to the EPA for further consideration.

IV.

For the aforementioned reasons, we will vacate the 2014 Final Rule to the extent it approved Pennsylvania's source-specific BART analysis and remand to the EPA for further proceedings consistent with this Opinion.

13. The EPA also argues that because 26 of Pennsylvania's 34 BART-eligible sources had less than a 0.5 deciview impact on any Class I area, the state could have exempted these 26 sources from its BART analysis. Under the agency's own regulations and the BART Guidelines, however, a state need not exempt these sources. *See, e.g.*, Regional Haze Regulations, 70 Fed.Reg. 39,104, 39,107 ("States certainly have the discretion to consider that all BART-eligible sources within the State are 'reasonably anticipated to cause or contribute' to some degree of visibility impairment in a Class I area."); BART Guidelines, 40 C.F.R. pt. 51, app. Y ("Once you have compiled your list of BART-eligible sources, you need to determine whether ... to make BART determinations for all of them....").

UNITED STATES of America

v.

Joseph W. NAGLE, Appellant,
No. 14–3184.

Ernest G. Fink, Appellant, No. 14–3422.

Nos. 14–3184, 14–3422.

United States Court of Appeals,
Third Circuit.

Sept. 30, 2015.

Argued April 27, 2015.

Filed: Sept. 30, 2015.

Background: Defendants, co-owners and executives of concrete manufacturing and construction corporations, were convicted in the United States District Court for the Middle District of Pennsylvania, Sylvia H. Rambo, J., 2010 WL 3516859, of conspiracy to defraud the United States in connection with fraudulent scheme to obtain subcontracts on transportation projects set aside for disadvantaged business enterprises (DBE). After defendant's post-trial

Draft Guidance on Progress Tracking Metrics, Long-term Strategies, Reasonable Progress Goals and Other Requirements for Regional Haze State Implementation Plans for the Second Implementation Period

EPA-457/P-16-001

July 2016

Draft Guidance on Progress Tracking Metrics, Long-term Strategies, Reasonable Progress Goals and Other Requirements for Regional Haze State Implementation Plans for the Second Implementation Period

U.S. Environmental Protection Agency

Office of Air Quality Planning and Standards

Air Quality Policy Division

Research Triangle Park, North Carolina

Table of Contents

Glossary of Terms Abbreviations and Acronyms

AERMOD – American Meteorological Society/Environmental Protection Agency Regulatory Model.

AFUDC – Allowance for funds used during construction.

AirControlNet – A database tool for conducting pollutant emissions control strategy and costing analysis, no longer supported by the EPA.

BART– Best Available Retrofit Technology.

Baseline period – The years of 2000 to 2004. The end of the baseline period is December 31, 2004.

b_{ext} – Light extinction coefficient.

Basic smoke management practices – Types of actions that the manager of a prescribed fire can take to reduce the amount of smoke generated by a prescribed fire and/or to reduce public exposure to the smoke that is generated.

CAA – Clean Air Act.

CAIR– Clean Air Interstate Rule, also referred to as the Transport Rule.

CALPUFF – A Lagrangian puff air quality modeling system.

CEM or CEMS – Continuous emissions monitoring system.

Class I area – In this document, this term is used for brevity and refers to a mandatory Federal Class I area as defined in 40 CFR 51.301, unless the term "non-mandatory" appears before it. This is a different usage than in 40 CFR part 51 subpart P, where this term encompasses both mandatory and non-mandatory Class I areas.

Clearest days – The 20 percent of monitored days in a calendar year with the lowest actual values of the deciview index.

CM – Coarse PM, equal to the difference between PM_{10} and $PM_{2.5}$.

CoST – Control Strategy Tool, part of the EPA's emissions modeling framework.

CSAPR– Cross State Air Pollution Rule.

Current visibility conditions – The average visibility impairment for the most impaired and clearest days during the most recent rolling 5-year period for which IMPROVE data are available as of a date 6 months preceding the required date of the progress report.

Deciview or dv – The unit of measurement on the deciview index scale for quantifying in a standard manner human perceptions of visibility.

Deciview index – A value for a day that is derived from calculated light extinction, such that uniform increments of the index correspond to uniform incremental changes in perception across the entire range of conditions, from pristine to very obscured. The deciview index is calculated

based on the following equation (for the purposes of calculating deciview, the atmospheric light extinction coefficient must be calculated from aerosol measurements):

Deciview index = 10 ln (b_{ext}/10 Mm^{-1}).

b_{ext} = the atmospheric light extinction coefficient, expressed in inverse megameters (Mm^{-1}).

EGU– Electric generating unit.

End of the applicable implementation period – December 31 of the year in which the next periodic implementation plan revision is due under 40 CFR 51.308(f).

Federal Class I area or Class I Federal area – Any federal land that is classified or reclassified Class I.

Federal Land Manager – The Secretary of the department with authority over the Federal Class I area (or the Secretary's designee) or, with respect to Roosevelt-Campobello International Park, the Chairman of the Roosevelt-Campobello International Park Commission.

FIP – Federal implementation plan.

FLM – Federal land manager.

f(RH) – A function of relative humidity representing the growth in particle size/mass with increasing ambient humidity.

Haziest days or worst visibility days – The 20 percent of monitored days in a calendar year with the highest actual values of the deciview index.

Implementation plan – Any SIP, TIP or FIP.

IMPROVE – The Interagency Monitoring of Protected Visual Environments monitoring program.

Indian tribe or tribe – 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 U.S. to Indians because of their status as Indians.

LAC – Light absorbing carbon, a species or component of PM.

Long-term strategy or LTS – The enforceable emissions limitations, compliance schedules and other measures necessary to achieve the reasonable progress goals for Class I areas affected by the state.

Mandatory Class I Federal Area, mandatory Federal Class I area – Any area identified in 40 CFR part 81.

MEVE1 – Mesa Verde National Park Class I area.

Mm – Millions of meters or megameters.

Mm^{-1} – Inverse megameters (used to indicate division by the number of megameters).

NC-II natural visibility conditions – A set of estimates of natural conditions for each Class I, widely used in the first implementation period. For each Class I area, the set included a value for the 20 percent least impaired days ("p10"), a value for the 20 percent most impaired days ("p90") and an annual average value. As used in the first implementation period, the term "least impaired days" corresponds to the term "clearest days" in this document, and the term "most impaired days" corresponds to the term "haziest days."

O&M – Operation and maintenance.

MMBtu, mmBtu or mmbtu – Millions of British Thermal Units.

Most impaired days – The 20 percent of monitored days in a calendar year with the highest amounts of visibility impairment.

Natural conditions – Naturally occurring phenomena that reduce visibility as measured in terms of light extinction, visual range, contrast or coloration.

Natural visibility conditions – The visibility (contrast, coloration and texture) that would have existed under natural conditions. Natural visibility conditions vary with time and location, and are estimated or inferred rather than directly measured.

NOx– Nitrogen oxides.

OMC – Organic carbonaceous material, a component or species of PM.

p10 – See NC-II natural visibility conditions.

p90 – See NC-II natural visibility conditions.

PM – Particulate matter.

PM species – A portion of PM of a certain chemical species or type, also referred to as a PM component.

Prescribed fire – Any fire intentionally ignited by management actions in accordance with applicable laws, policies and regulations to meet specific land or resource management objectives.

Reasonably attributable – Attributable by visual observation or any other appropriate technique.

Reasonable progress goal or RPG – A visibility goal, in deciviews, for a Class I area that provides for reasonable progress towards achieving natural visibility conditions. There are two RPGs for each Class I area: one for the most impaired days and one for the clearest days.

Reasonably attributable visibility impairment or RAVI – Visibility impairment that is caused by the emission of air pollutants from one, or a small number of sources.

Regional haze – Visibility impairment that is caused by the emission of air pollutants from numerous sources located over a wide geographic area. Such sources include, but are not limited to, major and minor stationary sources, mobile sources and area sources.

RH – Relative humidity.

RHR – Regional Haze Rule (used only in Appendix D).

RPO – Regional planning organization.

SCICHEM – A Lagrangian photochemical puff air quality model.

SCR – Selective catalytic reduction.

SIP – State implementation plan.

Smoke management program – A framework to minimize the impact of smoke from prescribed agricultural and/or wildland management burning operations that includes enforceable restrictions on prescribed fire. In the context of the Regional Haze Rule, the EPA considers a program to be a "smoke management program" if it has these six features: (i) authorization to burn, (ii) minimizing air pollutant emissions, (iii) smoke management components of burn plans, (iv) public education and awareness, (v) surveillance and enforcement and (vi) program evaluation. "Authorization to burn" means that a government authority restricts where, when and/or by whom a prescribed fire may be conducted.

SNCR – Selective non-catalytic reduction.

SO_2 – Sulfur dioxide.

Soil or fine soil – The portion, species or component of $PM_{2.5}$ attributable to crustal material, as estimated based on the quantity of certain chemical elements in the sample of $PM_{2.5}$.

State – One of the 50 states, the District of Columbia, or the Virgin Islands. Other U.S. territories are not subject to the Regional Haze Rule.

Stationary source – The Regional Haze Rule defines this term as "any building, structure, facility or installation which emits or may emit any air pollutant." In this document, the term is used less precisely, and depending on context, it may also refer to a single emission release point, process or unit at a facility. Statements in this document that include the word "source" are not necessarily meant to interpret the provisions of the Regional Haze Rule.

TIP – Tribal implementation plan.

URP – Uniform rate of progress.

U.S. – The United States.

Visibility – The degree of perceived clarity when viewing objects at a distance. Visibility includes perceived changes in contrast, coloration and texture elements in a scene.

Visibility impairment – The Regional Haze Rule defines this term as "any humanly perceptible difference between actual visibility conditions and natural visibility conditions. Because natural visibility conditions can only be estimated or inferred, visibility impairment also is estimated or inferred rather than directly measured." While the regulatory definition of visibility impairment inherently means anthropogenic visibility impairment, this document sometimes adds the word "anthropogenically" when it may be useful to the reader to emphasize this point or to draw a distinction between reductions in visibility due to anthropogenic emissions and reductions in visibility due to emissions from natural sources.

We, us or the EPA – The U.S. Environmental Protection Agency

Wildfire – Any fire started by an unplanned ignition caused by lightning; volcanoes; other acts of nature; unauthorized activity; or accidental, human-caused actions, or a prescribed fire that has

been declared to be a wildfire. A wildfire that predominantly occurs on wildland is a natural event.

Wildland – An area in which human activity and development is essentially non-existent, except for roads, railroads, power lines and similar transportation facilities. Structures, if any, are widely scattered.

WIMO – Wichita Mountains Class I area.

1. Introduction

1.1. Regional haze

Regional haze, as defined in the Regional Haze Rule at 40 CFR 51.300, is "visibility impairment that is caused by the emission of air pollutants from numerous sources located over a wide geographic area. Such sources include, but are not limited to, major and minor stationary sources, mobile sources, and area sources."[1] This visibility impairment is a result of particles and gases in the atmosphere that scatter and absorb light, thus acting to reduce overall visibility. The primary cause of atmospheric haze is light extinction (scattering and absorption) by particulate matter (PM).[2] The Regional Haze Rule requires states to submit a series of state implementation plans (SIPs) to protect visibility in certain national parks and wilderness areas, known as mandatory Federal Class I areas. A state should also recognize that progress towards natural visibility conditions will require the accumulation of reductions in air pollution and associated light extinction that may not be individually perceptible.

1.2. Purpose of this guidance

The purpose of this guidance is to advise states on how to develop and submit regional haze SIPs for the second implementation period (2018-2028), which are due by July 31, 2021. The required content of these SIPs is specified in 40 CFR 51.308(f), which was revised in 2016.[3] This guidance contains current EPA interpretations of the requirements of the Clean Air Act (CAA) and this section of the Regional Haze Rule.

None of the recommendations contained in this guidance are binding or enforceable against any person, and no part of the guidance or the guidance as a whole constitutes final agency action that could injure any person or represent the consummation of agency decision making. Because this guidance is not binding or enforceable, states may choose not to follow the recommendations in this guidance provided that they adhere to the relevant statutory and regulatory requirements and provide rational explanations for their decision making. Only final actions taken to approve or disapprove SIP submissions that implement any of the recommendations in this guidance would be final actions for purposes of CAA section 307(b). Therefore, this guidance is not judicially reviewable. This document is not a rule or regulation, and the guidance it contains may not apply to a particular situation based upon the individual

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[1] While the Regional Haze Rule's definition of visibility impairment inherently means anthropogenic visibility impairment, this document sometimes adds the word "anthropogenically" when it may be useful to the reader to emphasize this point or to draw a distinction between reductions in visibility due to anthropogenic emissions and reductions in visibility due to emissions from natural sources.

[2] For purposes of the Regional Haze Rule, light extinction is estimated from measurements of PM and its chemical components (sulfate, nitrate, organic carbonaceous material (OMC), light absorbing carbon (LAC), fine soil, sea salt and coarse material (CM)), assumptions about relative humidity at the monitoring site and the use of a commonly accepted algorithm. *See* section 5.12. These estimates of light extinction are logarithmically transformed to deciviews. The PM measurements used in the regional haze program are collected by the IMPROVE (Interagency Monitoring for PROtected Visual Environments) monitoring network.

[3] Note to reviewers of this draft guidance document: For clarity for purposes of comment and for ease in finalization, this draft version of this guidance document is written as if the revisions proposed in May 2016 have been finalized as proposed. Later footnotes, addressed to reviewers like this one, provide most specific explanations when needed for clarity. If the final revisions to the Regional Haze Rule differ from this assumption, corresponding changes will be made in the final guidance document.

- On June 30, 2016, the U.S. Environmental Protection Agency (EPA) issued a draft guidance document for the Regional Haze Program titled, "Draft Guidance on Progress Tracking Metrics, Long-term Strategies, Reasonable Progress Goals and Other Requirements for Regional Haze State Implementation Plans for the Second Implementation Period." The purpose of this non-binding draft guidance document is to advise states on how to develop and submit regional haze State Implementation Plans (SIPs) for the second implementation period (2018-2028), which, under the currently proposed revision of the Regional Haze Rule, are due by July 31, 2021. This draft guidance document also includes EPA recommendations for how states should use the flexibilities provided by the Regional Haze Rule.

- This guidance document, when final, is expected to complement the EPA's separate action to revise the Regional Haze Rule.
    - The EPA recently extended the public comment period on the proposed Regional Haze Rule revisions to ensure overlap between the public comment periods on the draft guidance document and the proposed rule revisions.
    - The proposed Regional Haze Rule revisions address, among other issues, state plan requirements for the second planning period.

- The Regional Haze Program, which implements a part of the Clean Air Act (CAA), helps to protect clear views in national parks, such as Grand Canyon National Park, and wilderness areas, such as the Okefenokee National Wildlife Refuge.
    - Vistas in these areas are often obscured by regional haze caused by emissions from numerous sources located over a wide geographic area. Over the past decade, the Regional Haze Program has helped to reduce emissions of visibility-impairing pollutants and improve visibility.

ACTION

- States are required to submit periodic plans demonstrating how they have and will continue to make progress towards achieving their visibility improvement goals. The first state plans were due in 2007 and covered the 2008-2018 first planning period. This draft guidance document provides useful background information and EPA guidance on meeting the requirements of the Regional Haze Rule for the second planning period from 2018-2028.

- The most significant issues addressed in this guidance include:
    - Consideration of visibility impacts and benefits along with the four statutory factors described in the CAA. The four statutory factors are the cost of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected source.
    - The relationship between reasonable progress goals (RPGs) and the long-term strategy.
    - Describing the planning obligations of a state based on the relationship of its 2028 RPG to the uniform rate of progress that if continued beyond 2028 would achieve natural visibility conditions in 2064.
    - How a state should evaluate small stationary sources and area sources for additional control.

- How a state should consider measures for its own sources that may be necessary for reasonable progress at Class I areas in other states.
- Clarifying consultation requirements among states.
- How a state can address the fact that highly variable natural sources, especially large fires, can mask the benefits of controlling anthropogenic sources, particularly in western areas of the United States (U.S.).
- How a state can address impacts from sources outside the U.S. in a realistic but effective way.
- How a state can address the expected increase in the frequency of wildfires, due to the past accumulation of fuel loads in wildlands and to climate change.

- The EPA will accept comment on this draft guidance document for 45 days after a notice of its availability is published in the *Federal Register*. This public comment period overlaps with the public comment period for the proposed revisions to the Regional Haze Rule, which was recently extended to August 10, 2016.

BACKGROUND

- In the CAA, Congress established a national visibility goal to prevent any future, and remedy any existing, visibility impairment in national parks and wilderness areas. "Impairment" specifically refers to human caused air pollution. Regional haze reduces visibility and is caused by the emission of air pollutants, primarily particle pollution, from numerous sources located over a wide geographic area. Fine particle pollution can also cause serious health problems including premature death.
  - In 1980, the EPA finalized regulations to address Reasonably Attributable Visibility Impairment.
  - In 1999, the EPA promulgated the Regional Haze Rule to address regional haze. The Regional Haze Rule calls for states to establish goals and emission reduction strategies for improving visibility in Federal Class I areas.
  - In 2003, the EPA issued guidance titled, "Guidance for Tracking Progress Under the Regional Haze Rule," which clarified how states and tribes could track progress under the regional haze program.
  - In 2003, the EPA also issued guidance titled, "Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule," which clarified how states and tribes could estimate natural conditions under the regional haze program.
  - In 2007, the EPA issued a guidance document titled, "Guidance for Setting Reasonable Progress Goals Under the Regional Haze Program". This 2007 guidance document will be superseded by this new draft guidance document once it is final.

- Based on visibility data through 2014, considerable visibility improvements have been made in affected areas in the eastern United States and in some western areas on the 20 percent haziest days.
  - The National Park Service estimates that emission controls established under the first planning period led to approximately 500,000 tons/year of sulfur dioxide (SO_2) and 300,000 tons/year of oxides of nitrogen (NOx) reductions.
  - In many cases, these improvements in visibility are a result of state and federal efforts to reduce particle pollution and the precursor pollutants that contribute to it, including the Regional Haze Rule.

HOW TO COMMENT

- Comments, identified by Docket ID No. EPA-HQ-OAR-2016-0289, may be submitted at *http://www.regulations.gov*. Follow the online instructions for submitting comments. For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions and general guidance on making effective comments, please visit *http://www2.epa.gov/dockets/commenting-epa-dockets*.

FOR MORE INFORMATION

- To download a copy of the draft guidance document from the EPA website, click on "Guidance Documents" at the following address: https://www.epa.gov/visibility.

- This draft guidance document and other background information are also available either electronically at http://www.regulations.gov, the EPA's electronic public docket and comment system, or in hardcopy at the EPA Docket Center's Public Reading Room.
    - The Public Reading Room is located in the EPA Headquarters, Room Number 3334 in the EPA William Jefferson Clinton West Building, located at 1301 Constitution Ave., NW, Washington, D.C. Hours of operation are 8:30 a.m. to 4:30 p.m. eastern standard time, Monday through Friday, excluding federal holidays.
    - Visitors are required to show photographic identification, pass through a metal detector and sign the EPA visitor log. All visitor materials will be processed through an X-ray machine as well. Visitors will be provided a badge that must be visible at all times.
    - Materials for this action can be accessed using Docket ID EPA-HQ-OAR-2016-0289.

- For further information about the proposed rule, contact Phil Lorang of the EPA's Office of Air Quality Planning and Standards at (919) 541-5463 or *lorang.phil@epa.gov*.