

27. A commenter at the first public hearing suggested that the timeframe for miners' review of the CPDM Performance Plan be expanded. For clarification, in developing the proposed rule, MSHA relied on the timeframe and process in the existing requirements for mine ventilation plans. In the proposal, MSHA did not intend to change the existing timeframe and process and stated that the proposed rule is consistent with ventilation plan requirements and would allow miners' representatives the opportunity to meaningfully participate in the process.

Dated: March 2, 2011.

**Joseph A. Main,**

*Assistant Secretary of Labor for Mine Safety and Health.*

[FR Doc. 2011-5127 Filed 3-7-11; 8:45 am]

**BILLING CODE 4510-43-P**

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 52

[EPA-R10-OAR-2011-0035, FRL-9276-6]

#### Approval and Promulgation of Implementation Plans; State of Oregon; Regional Haze State Implementation Plan

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** EPA is proposing to approve a State Implementation Plan (SIP) revision, submitted by the State of Oregon on December 20, 2010, with supplemental information submitted February 1, 2011, as meeting the requirements of Clean Air Act (CAA) section 110(a)(2)(D)(i)(II) as it applies to visibility for the 1997 8-hour ozone and 1997 particulate matter (PM<sub>2.5</sub>) National Ambient Air Quality Standards (NAAQS). EPA is also proposing to approve a portion of the SIP submittal, as meeting certain requirements of the regional haze program, including the Federal regulations for best available retrofit technology (BART).

**DATES:** Written comments must be received at the address below on or before April 7, 2011.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-R10-OAR-2011-0035, by one of the following methods:

- <http://www.regulations.gov>: Follow the on-line instructions for submitting comments.
- *E-mail:* Keith Rose at [R10-Public\\_Comments@epa.gov](mailto:R10-Public_Comments@epa.gov).

- *Mail:* Keith Rose, EPA Region 10, Office of Air, Waste and Toxics, AWT-107, 1200 Sixth Avenue, Suite 900, Seattle, WA 98101.

- *Hand Delivery/Courier:* EPA Region 10, 1200 Sixth Avenue, Suite 900, Seattle, WA 98101. *Attention:* Keith Rose, Office of Air, Waste and Toxics, AWT-107. Such deliveries are only accepted during normal hours of operation, and special arrangements should be made for deliveries of boxed information.

*Instructions:* Direct your comments to Docket ID No. EPA-R10-OAR-2011-0035. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through <http://www.regulations.gov> or e-mail. The <http://www.regulations.gov> Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA, without going through <http://www.regulations.gov>, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at <http://www.epa.gov/epahome/dockets.htm>.

*Docket:* All documents in the docket are listed in the <http://www.regulations.gov> index. Although listed in the index, some information is not publicly available (e.g., CBI or other information whose disclosure is restricted by statute). Certain other material, such as copyrighted material, will be publicly available only in hard copy form. Publicly available docket materials are available either electronically at <http://www.regulations.gov> or in hard copy at the Office of Air, Waste and Toxics, EPA Region 10, 1200 Sixth Avenue, Suite 900, Seattle, WA 98101. EPA requests that if at all possible, you contact the individual listed below to view the hard copy of the docket.

**FOR FURTHER INFORMATION CONTACT:** Mr. Keith Rose at telephone number (206) 553-1949, [rose.keith@epa.gov](mailto:rose.keith@epa.gov) or the above EPA, Region 10 address.

**SUPPLEMENTARY INFORMATION:** Throughout this document whenever "we," "us," or "our" is used, we mean the EPA. Information is organized as follows:

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#### I. Background for EPA's Proposed Action

In the CAA Amendments of 1977, Congress established a program to protect and improve visibility in the national parks and wilderness areas. See CAA section 169(A). Congress amended the visibility provisions in the CAA in 1990 to focus attention on the problem of regional haze. See CAA section 169(B). EPA promulgated regulations in 1999 to implement sections 169A and 169B of the Act. These regulations require States to develop and implement plans to ensure reasonable progress toward improving visibility in mandatory Class I Federal areas<sup>1</sup> (Class

<sup>1</sup> Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6000 acres, wilderness areas and national memorial parks

I areas). 64 FR 35714 (July 1, 1999); *see also* 70 FR 39104 (July 6, 2005) and 71 FR 60612 (October 13, 2006).

In this action, EPA is proposing to approve certain provisions of Oregon's Regional Haze SIP submission addressing the requirements for best available retrofit technology (BART), the calculation of baseline and natural visibility conditions, and the statewide inventory of visibility-impairing pollutants. EPA is also proposing to approve the provisions of Oregon's SIP submittal addressing BART as meeting Oregon's obligations under section 110(a)(2)(D)(i)(II) of the CAA for visibility. EPA is not taking action today on those provisions of the Regional Haze SIP submittal related to reasonable progress goals and the long term strategy.

#### A. Definition of Regional Haze

Regional haze is impairment of visual range or colorization caused by emission of air pollution produced by numerous sources and activities, located across a broad regional area. The sources include but are not limited to, major and minor stationary sources, mobile sources, and area sources including non-anthropogenic sources. Visibility impairment is primarily caused by fine particulate matter (PM<sub>2.5</sub>) or secondary aerosol formed in the atmosphere from precursor gasses (*e.g.*, sulfur dioxide, nitrogen oxides, and in some cases, ammonia and volatile organic compounds). Atmospheric fine particulate reduces clarity, color, and visual range of visual scenes. Visibility-reducing fine particulates are primarily composed of sulfate, nitrate, organic carbon compounds, elemental carbon, and soil dust, and impair visibility by scattering and absorbing light. Fine particulate can also cause serious health effects and mortality in humans, and contributes to environmental effects such as acid deposition and eutrophication.<sup>2</sup>

exceeding 5000 acres, and all international parks that were in existence on August 7, 1977. 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. 42 U.S.C. 7472(a). Although States and Tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to "mandatory Class I Federal areas." Each mandatory Class I Federal area is the responsibility of a "Federal Land Manager." 42 U.S.C. 7602(i). When we use the term "Class I area" in this action, we mean a "mandatory Class I Federal area."

<sup>2</sup> See 64 FR at 35715.

Data from the existing visibility monitoring network, the "Interagency Monitoring of Protected Visual Environments" (IMPROVE) monitoring network, show that visibility impairment caused by air pollution occurs virtually all the time at most national parks and wilderness areas. Average visual range in many Class I areas in the Western United States is 100–150 kilometers, or about one-half to two-thirds the visual range that would exist without anthropogenic air pollution.<sup>3</sup> Visibility impairment also varies day-to-day and by season depending on variation in meteorology and emission rates.

#### B. Regional Haze Rules and Regulations

In section 169A of the 1977 CAA Amendments, Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes as a national goal the "prevention of any future, and the remedying of any existing, impairment of visibility in Class I areas which impairment results from manmade air pollution." CAA section 169A(a)(1). On December 2, 1980, EPA promulgated regulations to address visibility impairment in Class I areas that is "reasonably attributable" to a single source or small group of sources, *i.e.*, "reasonably attributable visibility impairment". See 45 FR 80084. These regulations represented the first phase in addressing visibility impairment. EPA deferred action on regional haze that emanates from a variety of sources until monitoring, modeling, and scientific knowledge about the relationships between pollutants and visibility impairment were improved.

Congress added section 169B to the CAA in 1990 to address regional haze issues. EPA promulgated a rule to address regional haze on July 1, 1999 (64 FR 35713) (the RHR). The RHR revised the existing visibility regulations to integrate into the regulation provisions addressing regional haze impairment and established a comprehensive visibility protection program for Class I areas. The requirements for regional haze, found at 40 CFR 51.308 and 51.309, are included in EPA's visibility protection regulations at 40 CFR 51.300–309. Some of the main elements of the regional haze requirements are summarized in section III of this rulemaking. The requirement to submit a regional haze SIP applies to all 50 States, the District

<sup>3</sup> *Id.*

of Columbia and the Virgin Islands.<sup>4</sup> 40 CFR 51.308(b) requires States to submit the first implementation plan addressing regional haze visibility impairment no later than December 17, 2007.

#### C. Roles of Agencies in Addressing Regional Haze

Successful implementation of the Regional Haze Program will require long-term regional coordination among States, Tribal governments, and various Federal agencies. As noted above, pollution affecting the air quality in Class I areas can be transported over long distances, even hundreds of kilometers. Therefore, to effectively address the problem of visibility impairment in Class I areas, States need to develop strategies in coordination with one another, taking into account the effect of emissions from one jurisdiction on the air quality in another.

Because the pollutants that lead to regional haze impairment can originate from across State lines, EPA has encouraged the States and Tribes to address visibility impairment from a regional perspective. *Five regional planning organizations*<sup>5</sup> (RPOs) were created nationally to address regional haze and related issues. One of the main objectives of the RPOs is to develop and analyze data and conduct pollutant transport modeling to assist the States or Tribes in developing their regional haze plans.

The Western Regional Air Partnership (WRAP),<sup>6</sup> one of the five RPOs nationally, is a voluntary partnership of State, Tribal, Federal, and local air agencies dealing with air quality in the West. WRAP member States include: Alaska, Arizona, California, Colorado, Idaho, Montana, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. WRAP Tribal members include Campo Band of Kumeyaay Indians, Confederated Salish and Kootenai Tribes, Cortina Indian Rancheria, Hopi Tribe, Hualapai Nation of the Grand Canyon, Native Village of Shungnak, Nez Perce Tribe, Northern Cheyenne Tribe, Pueblo of Acoma, Pueblo of San Felipe, and Shoshone-Bannock Tribes of Fort Hall.

<sup>4</sup> Albuquerque/Bernalillo County in New Mexico must also submit a regional haze SIP to completely satisfy the requirements of section 110(a)(2)(D) of the CAA for the entire State of New Mexico under the New Mexico Air Quality Control Act (section 74–2–4).

<sup>5</sup> See <http://www.epa.gov/air/visibility/regional.html> for description of the regional planning organizations.

<sup>6</sup> The WRAP Web site can be found at <http://www.wrapair.org>.

#### D. Interstate Transport for Visibility

On July 18, 1997, EPA promulgated new NAAQS for 8-hour ozone and for PM<sub>2.5</sub>. 62 FR 38652. Section 110(a)(1) of the CAA requires States to submit a plan to address certain requirements for a new or revised NAAQS within three years after promulgation of such standards, or within such shorter time as EPA may prescribe. Section 110(a)(2) of the CAA lists the elements that such new plan submissions must address, as applicable, including section 110(a)(2)(D)(i), which pertains to the interstate transport of certain emissions.

On April 25, 2005, EPA published a "Finding of Failure to Submit SIPs for Interstate Transport for the 8-hour Ozone and PM<sub>2.5</sub> NAAQS." 70 FR 21147. This included a finding that Oregon and other States had failed to submit SIPs to address interstate transport of emissions affecting visibility and started a 2-year clock for the promulgation of Federal Implementation Plans (FIPs) by EPA, unless the States made submissions to meet the requirements of section 110(a)(2)(D)(i) and EPA approves such submissions. *Id.*

On August 15, 2006, EPA issued guidance on this topic entitled "Guidance for State Implementation Plan (SIP) Submissions to Meet Current Outstanding Obligations Under section 110(a)(2)(D)(i) for the 8-Hour Ozone and PM<sub>2.5</sub> National Ambient Air Quality Standards" (2006 Guidance). We developed the 2006 Guidance to make recommendations to States for making submissions to meet the requirements of section 110(a)(2)(D)(i) for the 1997 8-hour ozone standards and the 1997 PM<sub>2.5</sub> standards.

As identified in the 2006 Guidance, the "good neighbor" provisions in section 110(a)(2)(D)(i) of the CAA require each State to have a SIP that prohibits emissions that adversely affect other States in ways contemplated in the statute. Section 110(a)(2)(D)(i) contains four distinct requirements related to the impacts of interstate transport. The SIP must prevent sources in the State from emitting pollutants in amounts which will: (1) Contribute significantly to nonattainment of the NAAQS in other States; (2) interfere with maintenance of the NAAQS in other States; (3) interfere with provisions to prevent significant deterioration of air quality in other States; or (4) interfere with efforts to protect visibility in other States.

With respect to establishing that emissions from sources in the State would not interfere with measures in other States to protect visibility, the

2006 Guidance recommended that States make a submission indicating that it was premature, at that time, to determine whether there would be any interference with measures in the applicable SIP for another State designed to "protect visibility" until the submission and approval of regional haze SIPs. Regional haze SIPs were required to be submitted by December 17, 2007. *See* 74 FR 2392. At this later point in time, however, EPA believes it is now necessary to evaluate such 110(a)(2)(D)(i) submissions from a State to ensure that the existing SIP, or the SIP as modified by the submission, contains adequate provisions to prevent interference with the visibility programs of other States, such as for consistency with the assumptions for controls relied upon by other States in establishing reasonable progress goals to address regional haze.

The Regional Haze Program, as reflected in the RHR, recognizes the importance of addressing the long-range transport of pollutants for visibility and encourages States to work together to develop plans to address haze. The regulations explicitly require each State to address its "share" of the emission reductions needed to meet the reasonable progress goals for neighboring Class I areas. States, working together through a regional planning process, are required to address an agreed-upon share of their contribution to visibility impairment in the Class I areas of their neighbors. 40 CFR 51.308(d)(3)(ii). Given these requirements, we anticipate that regional haze SIPs will contain measures that will achieve these emissions reductions, and that these measures will meet the requirements of section 110(a)(2)(D)(i).

As a result of the regional planning efforts in the West, all States in the WRAP region contributed information to a Technical Support System (TSS) which provides an analysis of the causes of haze, and the levels of contribution from all sources within each State to the visibility degradation of each Class I area. The WRAP States consulted in the development of reasonable progress goals, using the products of this technical consultation process to co-develop their reasonable progress goals for the Western Class I areas. The modeling done by the WRAP relied on assumptions regarding emissions over the relevant planning period and embedded in these assumptions were anticipated emissions reductions in each of the States in the WRAP, including reductions from BART and other measures to be adopted as part of the State's long term strategy

for addressing regional haze. The reasonable progress goals in the draft and final regional haze SIPs that have now been prepared by States in the West accordingly are based, in part, on the emissions reductions from nearby States that were agreed on through the WRAP process.

Oregon submitted a Regional Haze SIP on July 16, 2009 to address the requirements of the RHR. On September 11, 2009, EPA determined that this SIP submission was complete. Oregon submitted a revised Regional Haze SIP on December 20, 2010, replacing the July 2009 submission. On February 1, 2011, Oregon provided EPA additional information to address the requirements of the RHR and the good neighbor provisions of section 110(a)(2)(D)(i)(II) of the Act, regarding visibility for the 1997 8-hour ozone NAAQS and the 1997 PM<sub>2.5</sub> NAAQS. EPA has reviewed the submittal and concluded at this time to propose to take action on only certain elements of Oregon's Regional Haze SIP. EPA is required to take final action either to approve Oregon's SIP submittal, or otherwise to take action to meet the requirements of section 110(a)(2)(D)(i)(II) regarding visibility on or before June 21, 2011.<sup>7</sup> EPA is proposing to find that certain elements of Oregon's Regional Haze SIP submittal meet these requirements. In particular, as explained in section V of this action, EPA is proposing to find that the BART measures in Oregon's Regional Haze SIP submittal, which EPA is proposing to approve in this action, will also mean that the Oregon SIP meets the requirements of section 110(a)(2)(D)(i)(II) regarding visibility for the 1997 8-hour ozone and 1997 PM<sub>2.5</sub> NAAQS.

## II. Requirements for Regional Haze SIPs

### A. The CAA and the Regional Haze Rule

Regional haze SIPs must assure reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas. Section 169A of the CAA and EPA's implementing regulations require States to establish long-term strategies for making reasonable progress toward meeting this goal. Implementation plans must also give specific attention to certain stationary sources that were in existence on August 7, 1977, but were not in operation before August 7, 1962, and require these sources, where appropriate, to install BART controls for

<sup>7</sup> *Wildearth Guardians v. Jackson*, Case No. 4:09-CV-02453-CW (N.D. Calif) (as modified by Jan 14, 2011 Order Granting Motion to Modify Consent Decree).

the purpose of eliminating or reducing visibility impairment. The specific regional haze SIP requirements are discussed in further detail below.

#### *B. Determination of Baseline, Natural, and Current Visibility Conditions*

The RHR establishes the deciview (dv) as the principal metric for measuring visibility. This visibility metric expresses uniform changes in haziness in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions. Visibility is determined by measuring the visual range (or deciview), which is the greatest distance, in kilometers or miles, at which a dark object can be viewed against the sky. The deciview is a useful measure for tracking progress in improving visibility, because each deciview change is an equal incremental change in visibility perceived by the human eye. Most people can detect a change in visibility at one deciview.<sup>8</sup>

The deciview is used in expressing reasonable progress goals (which are interim visibility goals towards meeting the national visibility goal), defining baseline, current, and natural conditions, and tracking changes in visibility. The regional haze SIPs must contain measures that ensure “reasonable progress” toward the national goal of preventing and remedying visibility impairment in Class I areas caused by manmade air pollution by reducing anthropogenic emissions that cause regional haze. The national goal is a return to natural conditions, *i.e.*, anthropogenic sources of air pollution would no longer impair visibility in Class I areas.

To track changes in visibility over time at each of the 156 Class I areas covered by the visibility program (40 CFR 81.401–437), and as part of the process for determining reasonable progress, States must calculate the degree of existing visibility impairment at each Class I area at the time of each regional haze SIP submittal and periodically review progress every five years midway through each 10-year implementation period. To do this, the RHR requires States to determine the degree of impairment (in deciviews) for the average of the 20% least impaired (“best”) and 20% most impaired (“worst”) visibility days over a specified time period at each of their Class I areas. In addition, States must also develop an estimate of natural visibility conditions for the purpose of comparing progress

toward the national goal. Natural visibility is determined by estimating the natural concentrations of pollutants that cause visibility impairment, and then calculating total light extinction based on those estimates. EPA has provided guidance to States regarding how to calculate baseline, natural and current visibility conditions in documents titled, EPA’s *Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule*, September 2003, (EPA–454/B–03–005 located at [http://www.epa.gov/ttncaaa1/t1/memoranda/rh\\_envcurhr\\_gd.pdf](http://www.epa.gov/ttncaaa1/t1/memoranda/rh_envcurhr_gd.pdf)), (hereinafter referred to as “EPA’s 2003 Natural Visibility Guidance”), and *Guidance for Tracking Progress Under the Regional Haze Rule* (EPA–454/B–03–004 September 2003 located at [http://www.epa.gov/ttncaaa1/t1/memoranda/rh\\_tpurhr\\_gd.pdf](http://www.epa.gov/ttncaaa1/t1/memoranda/rh_tpurhr_gd.pdf)), (hereinafter referred to as “EPA’s 2003 Tracking Progress Guidance”).

For the first regional haze SIPs that were due by December 17, 2007, “baseline visibility conditions” were the starting points for assessing “current” visibility impairment. Baseline visibility conditions represent the degree of visibility impairment for the 20% least impaired days and 20% most impaired days for each calendar year from 2000 to 2004. Using monitoring data for 2000 through 2004, States are required to calculate the average degree of visibility impairment for each Class I area, based on the average of annual values over the five-year period. The comparison of initial baseline visibility conditions to natural visibility conditions indicates the amount of improvement necessary to attain natural visibility, while the future comparison of baseline conditions to the then-current conditions will indicate the amount of progress made. In general, the 2000–2004 baseline time period is considered the time from which improvement in visibility is measured.

#### *C. Consultation With States and Federal Land Managers*

The RHR requires that States consult with Federal Land Managers (FLMs) before adopting and submitting their SIPs. See 40 CFR 51.308(i). States must provide FLMs an opportunity for consultation, in person and at least 60 days prior to holding any public hearing on the SIP. This consultation must include the opportunity for the FLMs to discuss their assessment of visibility impairment in any Class I area and to offer recommendations on the development of the reasonable progress goals and on the development and implementation of strategies to address

visibility impairment. Further, a State must include in its SIP a description of how it addressed any comments provided by the FLMs. Finally, a SIP must provide procedures for continuing consultation between the State and FLMs regarding the State’s visibility protection program, including development and review of SIP revisions, five-year progress reports, and the implementation of other programs having the potential to contribute to impairment of visibility in Class I areas.

#### *D. Best Available Retrofit Technology*

Section 169A of the CAA directs States to evaluate the use of retrofit controls at certain larger, often uncontrolled, older stationary sources in order to address visibility impacts from these sources. Specifically, section 169A(b)(2)(A) of the CAA requires States to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal, including a requirement that certain categories of existing major stationary sources<sup>9</sup> built between 1962 and 1977 procure, install, and operate the “Best Available Retrofit Technology” as determined by the State. States are directed to conduct BART determinations for such sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area. Rather than requiring source-specific BART controls, States also have the flexibility to adopt an emissions trading program or other alternative program as long as the alternative provides greater reasonable progress towards improving visibility than BART.

On July 6, 2005, EPA published the *Guidelines for BART Determinations Under the Regional Haze Rule* at appendix Y to 40 CFR Part 51 (hereinafter referred to as the “BART Guidelines”) to assist States in determining which of their sources should be subject to the BART requirements and in determining appropriate emission limits for each applicable source. In making a BART applicability determination for a fossil fuel-fired electric generating plant with a total generating capacity in excess of 750 megawatts, a State must use the approach set forth in the BART Guidelines. A State is encouraged, but not required, to follow the BART Guidelines in making BART determinations for other types of sources.

States must address all visibility-impairing pollutants emitted by a source

<sup>8</sup> The preamble to the RHR provides additional details about the deciview. 64 FR 35714, 35725 (July 1, 1999).

<sup>9</sup> The set of “major stationary sources” potentially subject to BART is listed in CAA section 169A(g)(7).

in the BART determination process. The most significant visibility-impairing pollutants are sulfur dioxide, nitrogen oxides, and fine particulate matter. EPA has indicated that States should use their best judgment in determining whether volatile organic compounds or ammonia compounds impair visibility in Class I areas.

Under the BART Guidelines, States may select an exemption threshold value for their BART modeling, below which a BART-eligible source would not be expected to cause or contribute to visibility impairment in any Class I area. The State must document this exemption threshold value in the SIP and must state the basis for its selection of that value. Any source with emissions that model above the threshold value would be subject to a BART determination review. The BART Guidelines acknowledge varying circumstances affecting different Class I areas. States should consider the number of emission sources affecting the Class I areas at issue and the magnitude of the individual sources' impacts. Generally, an exemption threshold set by the State should not be higher than 0.5 deciview.

In their SIPs, States must identify potential BART sources, described as "BART-eligible sources" in the RHR, and document their BART control determination analyses. The term "BART-eligible source" used in the BART Guidelines means the collection of individual emission units at a facility that together comprises the BART-eligible source. In making BART determinations, section 169A(g)(2) of the CAA requires that States consider the following 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. States are free to determine the weight and significance to be assigned to each factor.

A regional haze SIP must include source-specific BART emission limits and compliance schedules for each source subject to BART. Once a State has made its BART determination, the BART controls must be installed and in operation as expeditiously as practicable, but no later than five years after the date EPA approves the regional haze SIP. CAA section 169(g)(4). 40 CFR 51.308(e)(1)(iv). In addition to what is required by the RHR, general SIP requirements mandate that the SIP must

also include all regulatory requirements related to monitoring, recordkeeping, and reporting for the BART controls on the source. States have the flexibility to choose the type of control measures they will use to meet the requirements of BART.

### III. EPA's Analysis of Oregon's Regional Haze SIP

#### A. Affected Class I Areas

There are 12 mandatory Class I areas, or portions of such areas within Oregon: Mt. Hood Wilderness Area, Mt. Jefferson Wilderness Area, Mt. Washington Wilderness Area, Kalmiopsis Wilderness Area, Mountain Lakes Wilderness Area, Gearhart Mountain Wilderness Area, Crater Lake National Park, Diamond Peak Wilderness Area, Three Sisters Wilderness Area, Strawberry Mountain Wilderness Area, Eagle Cap Wilderness Area, and Hells Canyon Wilderness Area. Hells Canyon Wilderness Area is shared with the State of Idaho. See 40 CFR 81.425. Oregon is responsible for developing reasonable progress goals (RPGs) for these 12 Class I areas. Oregon Department of Environmental Quality (ODEQ) consulted with the appropriate State air quality agency in Washington, Idaho, California, and Nevada to determine Oregon's contribution to haze in neighboring States' Class I areas. See chapter 13, section 13.2 of the Oregon Regional Haze SIP submittal. See also the WRAP Technical Support Document, February 28, 2011 (WRAP TSD) supporting this action.<sup>10</sup>

#### B. Baseline and Natural Conditions and Uniform Rate of Progress

Oregon, using data from the IMPROVE monitoring network and analyzed by WRAP, established baseline and natural visibility conditions as well as the uniform rate of progress (URP) to achieve natural visibility conditions by 2064 for all Oregon Class I areas within its borders.

Baseline visibility for the most-impaired (20% worst) days and the least-impaired (20% best) days was calculated from monitoring data collected by IMPROVE monitors. Not every Class I area has an IMPROVE monitor, rather a monitor in a Class I area may represent the air quality and visibility conditions for more than a single Class I area. The Class I areas that are represented by a monitor in a nearby Class I area were determined by the

<sup>10</sup> EPA evaluated the technical work products of the WRAP used by Oregon in support of this Regional Haze SIP submittal. The results of that evaluation are included in the WRAP Technical Support Document.

States and the IMPROVE Steering Committee. This decision was based on the Class I areas in a group having the same general visibility conditions. IMPROVE monitors are located in six Oregon Class I areas and represent all 12 Oregon Class I areas. Specifically, the Oregon Class I areas are segregated into six groups. These groups and Class I areas are:

- *North Cascades*: Mt. Hood Wilderness Area.
- *Central Cascades*: Mt. Jefferson, Mt. Washington, and Three Sisters Wilderness Areas.
- *Southern Cascades*: Crater Lake National Park, Diamond Peak, Mountain Lakes, and Gearhart Wilderness Areas.
- *Coast Range*: Kalmiopsis Wilderness Area.
- *Eastern Oregon*: Strawberry Mountain and Eagle Cap Wilderness Areas.
- *Eastern Oregon/Western Idaho*: Hells Canyon Wilderness Area.

In general, WRAP based their estimates of natural conditions on EPA guidance, *Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Program (EPA-45/B-03-0005 September 2003)* but incorporated refinements which EPA believes provides results more appropriate for western States than the general EPA default approach. See section 2.D and 2.E of the WRAP TSD, supporting this action.

Visibility on 20% worst days during the 2000–04 baseline period for each group of Oregon Class I areas is:

- North Cascades—14.9 dv
- Central Cascades—15.3 dv
- Southern Cascades—13.7 dv
- Coast Range—15.5 dv
- Eastern Oregon—18.6 dv
- Eastern Oregon/Western Idaho—18.6 dv

Visibility on 20% best days during the 2000–04 baseline period for each group of Oregon Class I areas is:

- North Cascades—2.2 dv
- Central Cascades—3.0 dv
- Southern Cascades—1.7 dv
- Coast Range—6.3 dv
- Eastern Oregon—4.5 dv
- Eastern Oregon/Western Idaho—5.5 dv

Natural visibility conditions on the 20% worst days for each group of Class I areas are:

- Northern Cascades—8.4 dv
- Central Cascades—8.8 dv
- Southern Cascades—7.6 dv
- Coast Range—9.4 dv
- Eastern Oregon—8.9 dv
- Eastern Oregon/Western Idaho—8.3 dv

The 2018 Uniform Rate of Progress (URP) goal for the 20% worst days in each group of Class I areas is:

- North Cascades—13.4 dv
- Central Cascades—13.8 dv
- Southern Cascades—12.3 dv
- Coast Range—14.1 dv
- Eastern Oregon—16.3 dv
- Eastern Oregon/Western Idaho—16.2 dv

Baseline visibility conditions, 2064 natural conditions, and reductions needed to achieve the 2018 URP for the 20% worst days for each group of Oregon Class I areas are identified in table 6–1 of chapter 6 of the Oregon Regional Haze Plan.

Based on our evaluation of the State's baseline and natural conditions analysis, EPA is proposing to find that Oregon has appropriately determined baseline visibility for the average 20% worst and 20% best days, and natural visibility conditions for the average 20% worst days in each Oregon Class I area. See sections 2.D and 2.E of the WRAP TSD supporting this action.

### C. Oregon Emissions Inventories

There are three main categories of air pollution emission sources: point sources, area sources, and mobile sources. Point sources are larger stationary sources that emit air pollutants. Area sources are large numbers of small sources that are widely distributed across an area, such as residential heating units, re-entrained dust from unpaved roads or windblown dust from agricultural fields. Mobile sources are sources such as motor vehicles, locomotives and aircraft.

EPA's Regional Haze Rule requires a statewide emission inventory of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any mandatory Class I area. 40 CFR 51.308(d)(4)(v). The WRAP, with data supplied by the States, compiled emission inventories for all major source categories in Oregon and estimated the 2002 baseline year (based on an average of 2000–2004). Oregon also compiled an emission inventory for 2018. Emission estimates for 2018 were generated from anticipated population growth, growth in industrial activity, and emission reductions from implementation of control measures, e.g., implementation of BART limitations and motor vehicle tailpipe emissions.

Chapter 8 of the Oregon Regional Haze SIP submittal discusses how emission estimates were determined for statewide emission inventories by pollutant and source category. Appendix A of the Oregon Regional Haze Plan identifies the Oregon emission inventory by county. Detailed estimates of the emissions used in the modeling conducted by the WRAP for

Oregon can be found at the WRAP Web site: <http://vista.cira.colostate.edu/TSS/Results/Emissions.aspx>.

The Oregon Regional Haze SIP submittal identifies total emissions for all visibility-impairing pollutants including sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOC), organic carbon (OC), elemental carbon (EC), other fine particulate (PM<sub>2.5</sub>), coarse particulate matter (PM coarse), and ammonia (NH<sub>3</sub>). These emission estimates were partitioned into nine emission source categories: Point source, area source, on-road mobile, off-road mobile, anthropogenic fire (prescribed fire and agricultural field burning), natural fire, road dust, and fugitive dust. See chapter 8.1 of the Oregon Regional Haze SIP submittal for additional detail on how the statewide emission inventory was developed, and for tables showing the emissions inventory for each pollutant by source category. The methods that WRAP used to develop these emission inventories are described in more detail in the WRAP TSD. As explained in the WRAP TSD, emissions were calculated using best available data and approved EPA methods. See WRAP TSD section 3.

Point sources in Oregon account for 39% (18,493 tons/year) of total State-wide SO<sub>2</sub> emissions. The most significant point sources are coal-fired electrical generation units. Area sources (such as Pacific offshore shipping, wood combustion, and natural gas combustion) contribute about 21% (9,932 tons/year) to Oregon statewide SO<sub>2</sub> emissions. On-road mobile and off-road mobile sources contribute a combined total of 21% (9,981 tons/year) of the Oregon SO<sub>2</sub> emissions. In the Oregon Regional Haze SIP submittal, the State projected SO<sub>2</sub> reductions of 57% in point sources, 15% in area sources, 94% combined reduction in on-road and off-road mobile source emissions, and 17% in anthropogenic fire emissions by 2018 (see Chapter 8 of the Oregon Regional Haze Plan).

Upon further review, EPA determined that the 57% reduction in point source emissions was partially based on WRAP's assumption of an SO<sub>2</sub> emission rate of 0.15 lb/mmBtu (presumptive limit for utility boilers identified in the BART Guidelines, see Section IV. E.4.) from the PGE Boardman coal fired power plant by 2018. The remaining SO<sub>2</sub> point emission reductions in Oregon would be achieved through ongoing and new industrial control requirements, and projected source retirements and shutdowns. However, the BART determination for PGE Boardman based on a 2020 plant lifetime, which EPA proposes to

approve in this rulemaking (see section III. E.4 below), achieves an SO<sub>2</sub> emission limit of 0.30 lb/mmBtu by 2018, or about 4,000 ton/year less SO<sub>2</sub> reductions than assumed by WRAP. Thus, statewide point source emission reductions of SO<sub>2</sub> are estimated by EPA to be 35% by 2018. However, if PGE Boardman ceases to burn coal by 2020, as it would under the proposed approved BART determination, there will be an estimated 76% reduction in SO<sub>2</sub> from point sources by 2020 which will provide a substantial improvement at that time in visibility in all 14 Class I areas currently impacted by PGE Boardman.

On-road mobile sources account for 43% (111,646 tons/year) of the total NO<sub>x</sub> statewide emissions in Oregon. Off-road mobile sources account for 21% (53,896 tons/year), natural fire accounts for 11% (27,397 tons/year), and point sources account for 10% (26,160 tons/year) of the statewide NO<sub>x</sub> emissions. The State expects on-road and off-road mobile source emissions to decline by 62% and 40%, respectively, by 2018, due to Federally mandated emission standards for mobile sources. The State also projects NO<sub>x</sub> emissions from point sources will decrease by 5% (or 1,213 tons/year). After evaluating the assumptions on which this 5% reduction was based, it appears that the 5% reduction does not include presumptive NO<sub>x</sub> emission reductions from the PGE Boardman facility by 2018. The presumptive NO<sub>x</sub> emission limit for utility boilers, like PGE Boardman boiler, is 0.23 lb/mmBtu. EPA BART Guidelines (Section IV (E)(5)). The current NO<sub>x</sub> emission limit for the PGE Boardman is 0.43 lb/mmBtu, which results in emissions of about 10,300 tons/year (based on 2007 actual emissions). The BART determination for PGE Boardman based on it ceasing to burn coal by 2020, which EPA proposes to approve in this rulemaking (see section III. E.4 below), achieves a NO<sub>x</sub> emission limit of 0.23 lb/mmBtu, or annual emissions of about 5,500 tons/year (a 47% reduction) by 2013. Thus, in EPA's estimation, there will be about a 23% reduction in NO<sub>x</sub> emissions from all Oregon point sources by 2018. The State expects emissions from natural fire to remain unchanged by 2018. The net effect of these projected emissions results in a 37% overall reduction in NO<sub>x</sub> emissions in Oregon by 2018.

Most of the organic carbon emissions in Oregon are from natural fire, which fluctuate greatly from year to year. For 2002, about 68% of statewide organic carbon emissions in Oregon were due to natural fire. Anthropogenic fire

(prescribed fire, agricultural field burning, and outdoor residential burning) accounts for 9% of the statewide organic carbon emissions. A variety of other area sources contribute a total of 19% of the statewide organic carbon, with residential wood combustion being a significant component. The State expects area source emissions to increase slightly (7%) by 2018, due mostly to population increases. The State projects the most significant reductions in organic carbon by 2018 will be from point sources (80%) due to anticipated emission controls, off-road mobile (36%) due to implementation of the Federal mobile source regulations, and anthropogenic fire (28%) due to stricter Oregon rules controlling prescribed burning, agricultural burning, and residential burning. However, because natural fire emissions are expected to remain unchanged, total organic carbon emissions are estimated to decline by only 3% by 2018.

Elemental carbon is associated with incomplete combustion. Like organic carbon, the primary source of elemental carbon in Oregon is natural fire (61%), area sources (such as wood combustion) (15%), and off-road mobile sources (12%). The State projects an increase of elemental carbon area source emissions by 6% due to population growth. Oregon estimates a decrease of combined on-road and off-road mobile source elemental carbon by about 65% by 2018. This reduction in mobile source emissions results from new Federal mobile source emission regulations. However, because elemental carbon emissions are dominated by natural fire, which are expected to remain unchanged, the State projects only an 11% reduction in State wide elemental carbon emissions by 2018.

Other fine particulates, particles with an aerodynamic diameter of less than 2.5 micrometers ( $PM_{2.5}$ ), are emitted directly from a variety of area sources. Area sources are responsible for 34% of all directly-emitted  $PM_{2.5}$  emissions in Oregon. Wind-blown dust from agriculture, mining, construction, and roads contribute about 25% to the total statewide  $PM_{2.5}$  emissions. The State projects a 12% increase in area source emissions due to population and economic growth, and wind-blown dust emissions to remain unchanged by 2018, resulting in a statewide 2% reduction in total  $PM_{2.5}$  by 2018.

Coarse particulate matter (PM coarse) is particulate matter within the size range of 2.5–10 micrometers. PM coarse emission sources include windblown dust, rock crushing and processing,

material transfer, and open pit mining. Windblown dust is the dominant source of PM coarse emissions in Oregon at 104,274 tons/year (60%). Statewide PM coarse emissions are estimated to increase by 17% in 2018, primarily because emissions from fugitive dust sources (construction, paved roads, and unpaved roads) are expected to increase 106% due to population growth, and windblown dust will remain unchanged.

Volatile organic compound (VOC) emissions are dominated by biogenic emissions from forests and vegetation, which account for about 70% of statewide Oregon VOC emissions. In Oregon, agricultural crops and urban vegetation are also significant sources. Other sources of VOCs are mobile sources at 8%, and area sources (industrial and commercial facilities, and residential solvent use) at 15%. Oregon projects that statewide area source emissions will increase by 36% by 2018, primarily due to population growth. As a result, the State estimates that total Oregon VOC emissions will increase by 2% by 2018.

Ammonia ( $NH_3$ ) does not directly impair visibility but can be a precursor to the formation of particulate in the atmosphere through chemical reaction with  $SO_2$  and  $NO_x$  to form “secondary aerosol” sulfate and nitrate. About 80% of the  $NH_3$  emissions in Oregon come from agricultural-related activities, primarily livestock operations and farm fertilizer applications. Since the  $NH_3$  emissions from these agricultural sources are expected to remain unchanged by 2018, and mobile source emissions of  $NH_3$  are projected to increase by 45% (1,463 tons/year) by 2018, Oregon projects that there will be a total 2% increase of  $NH_3$  emissions by 2018.

#### *D. Sources of Visibility Impairment in Oregon Class I Areas*

Each pollutant species has its own visibility impairing property;  $1 \mu g/m^3$  of sulfate at high humidity, for example, is more effective in scattering light than  $1 \mu g/m^3$  of organic carbon and therefore impairs visibility more than organic carbon. Following the approach recommended by the WRAP, and as explained more fully below, Oregon used a two step process to identify the contribution of each source or source category to existing visibility impairment. First, ambient pollutant concentration by species (such as sulfate, nitrate, organic carbon, and elemental carbon) was determined from the IMPROVE data collected for each group of Class I areas. These concentrations were then converted into

deciview values to distribute existing impairment among the measured pollutant species. The deciview value for each pollutant species was calculated by using the “revised IMPROVE equation” (See Section 2.C of the WRAP TSD) to calculate extinction from each pollutant species concentration. Extinction, in inverse megameters, was then converted to deciview using the equation defining deciview. Second, the Comprehensive Air Quality Model with Extensions (CAMx) and PM Source Apportionment Technology (PSAT) models were used to determine which sources and source categories contributed to the ambient concentration of each pollutant species. Thus, impairment was distributed by source and source category.

After considering the available models, the WRAP and Western States selected two source apportionment analysis tools. The first source apportionment tool was the Comprehensive Air Quality Model with Extensions (CAMx) in conjunction with PM Source Apportionment Technology (PSAT). This model uses emission source characterization, meteorology and atmospheric chemistry for aerosol formation to predict pollutant concentrations in the Class I area. The predicted results are compared to measured concentrations to assess accuracy of model output. CAMx PSAT modeling was used to determine source contribution to ambient sulfate and nitrate concentrations. The WRAP used state-of-the-science source apportionment tools within a widely used photochemical model. EPA has reviewed the PSAT analysis and considers the modeling, methodology, and analysis acceptable. See section 6.A of the WRAP TSD.

The second tool was the Weighted Emissions Potential (WEP) model, used primarily as a screening tool to decide which geographic source regions have the potential to contribute to haze at specific Class I areas. WEP does not account for atmospheric chemistry (secondary aerosol formation) or removal processes, and thus is used for estimating inert particulate concentrations. The model uses back trajectory wind flow calculations and resident time of an air parcel to determine source and source category and location for ambient organic carbon, elemental carbon,  $PM_{2.5}$ , and coarse PM concentrations. These modeling tools were the state-of-the-science and EPA has determined that these tools were appropriately used by WRAP for regional haze planning. Description of these tools and our evaluation of them

are described in more detail in section 6 of the WRAP TSD.

Section 9.2.1 of the Oregon SIP submittal explains that sources in areas outside of the modeling domain (*i.e.*, portions of northern Canada, southern Mexico, Pacific offshore, and global sources) contribute between 40% to 60% of the sulfate that impairs visibility in all of Oregon's Class I areas on the 20% worst days. SO<sub>2</sub> sources within the WRAP region contribute about 33% of sulfate that impairs visibility in Oregon Class I areas. Of the SO<sub>2</sub> contribution from WRAP States, about 50% of the SO<sub>2</sub> comes from point, area, and mobile sources in Oregon.

The PSAT results also show that between 15 to 33% of the nitrate impairing visibility in all of Oregon's Class I areas comes from sources outside of the modeling domain, with the remainder from sources within the WRAP region.

#### North and Central Cascades Class I Areas

The PSAT results for sulfate show that for the 20% worst days during 2000–2004 the North and Central Cascades Class I areas are mostly impacted by sulfate from a combination of SO<sub>2</sub> point, area and mobile sources in Washington, Oregon, and marine shipping in the Pacific offshore region (*see* Oregon Regional Haze SIP submittal Figures 9.2.1–1 through Figures 9.2.1–6). The mobile source contribution to sulfate pollution is expected to decline significantly by 2018 due to the implementation of the Federal low sulfur diesel fuel rule, which went into effect in 2006 for on-road mobile sources, and took effect for non-road mobile sources in 2010.

The PSAT results for nitrate show that a majority of the nitrate impacting the North and Central Cascades Class I areas is from mobile sources in Oregon and Washington (*see* Oregon Regional Haze SIP submittal Figures 9.2.2–1 through Figures 9.2.2–6). PSAT results predict about a 50% reduction in nitrate concentrations in these areas by 2018 due to a 50% reduction in NO<sub>x</sub> emissions from Oregon and Washington mobile sources.

Based on the WEP model results, the organic carbon in the North Cascades on the 20% worst visibility days comes mostly from area sources and natural fires in Oregon, with a small contribution from area sources in Washington. On the 20% worst visibility days at North Cascades, most of the primary PM<sub>2.5</sub> contributions come from area and fugitive dust sources in Oregon, and to a lesser extent area and point sources in Washington.

For the 20% worst visibility days in the Central Cascades, most of the organic carbon comes from a combination of area source emissions and natural and anthropogenic fire in Oregon. For the 20% worst visibility days in the Central Cascades, the OC comes primarily from Oregon area sources. For the 20% worst visibility days in the Central Cascades, most of the PM<sub>2.5</sub> comes from area sources in Oregon.

#### Southern Cascades Class I Areas

For the 20% worst days in the three Class I areas in the Southern Cascades, overall visibility impairment due to sulfate are lower compared to the Northern and Central Cascade Class I areas. Most of the sulfate impacting these Southern Cascade Class I areas is from point sources in Oregon, Washington, California, and Canada. Pacific offshore shipping is also a substantial contributor of sulfate to this area.

For the 20% worst days in Southern Cascades, the most significant sources of nitrate are mobile sources in Oregon and Washington. The impact from these sources is expected to decrease by about 50% by 2018 due to Federal mobile source emission control measures.

For the 20% worst visibility days in the Southern Cascades, approximately 90% of the organic carbon contribution came from natural fires in 2002. Emissions from natural fires are expected to be unchanged by 2018.

#### Coast Range Class I Area

The only Class I area in the Coast Range group is the Kalmiopsis Wilderness Area. The most significant sources of sulfate to the Kalmiopsis Wilderness Area are natural fires in Oregon, and marine shipping in the Pacific Ocean. Both of these sources are expected to be unchanged by 2018.

A majority of the nitrate impacting the Kalmiopsis Wilderness Area is from mobile sources in Oregon and from marine shipping in the Pacific Ocean. Smaller contributions come from Washington and California mobile sources. Mobile source contributions to this area are expected to decrease by about 50% by 2018.

For the 20% worst visibility days in the Kalmiopsis Wilderness, almost all of organic carbon for the 2002 base year came from natural fire. For the 20% worst visibility days in the Kalmiopsis, the PM<sub>2.5</sub> contributions were mostly from natural fire in Oregon.

For the 20% worst days in the Kalmiopsis Wilderness Area, the contribution from point sources is relatively small. For the 20% of worst

days in the Kalmiopsis Wilderness Area, the vast majority of nitrate comes from Oregon mobile sources, with smaller contributions from Washington and California mobile sources. There is also a substantial nitrate contribution from Pacific offshore shipping, due primarily to the close proximity of the Kalmiopsis Wilderness Area to the Pacific Ocean.

#### Eastern Oregon Class I Areas

For the 20% worst days in Strawberry Mountain Wilderness and Eagle Cap Wilderness Areas, the contribution of sulfates from each geographical area is relatively low (less than 0.12 micrograms per cubic meter), with the largest contribution being from point sources from Canada, Washington, and Oregon. However, the visibility on the 20% worst days in this area is significantly impacted (greater than 0.20 micrograms per cubic meter) by a combination of point, area, and mobile NO<sub>x</sub> sources in Oregon, Washington, and Idaho.

For the 20% worst visibility days in the Strawberry Mountain Wilderness and Eagle Cap Wilderness Areas, about 80% of the organic carbon contribution came from a combination of natural fires and anthropogenic sources in Oregon. For the 20% worst visibility days there is also a dominant PM<sub>2.5</sub> contribution from windblown dust, and some fugitive and road dust area and fire sources in Oregon. The contribution of this mixture of source from Washington is about half of the Oregon level.

#### Eastern Oregon/Western Idaho Class I Area

For the 20% worst days in the Hells Canyon Wilderness Area, the contribution of sulfates from each geographical area is relatively low (less than 0.06 micrograms per cubic meter), with the largest contribution being from point sources from Canada, Idaho, and Oregon. However, the visibility on the 20% worst days in this area is significantly impacted (greater than 0.35 micrograms per cubic meter) by a combination of mobile and area NO<sub>x</sub> sources in Idaho, and to a lesser degree, point and mobile sources in Oregon.

For the 20% worst visibility days in the Hells Canyon Wilderness Area, the majority of the organic carbon contribution comes from a combination of Oregon natural and anthropogenic fire sources and to a lesser extent from anthropogenic and natural fire sources in Oregon. For the 20% worst visibility days in the Hells Canyon Wilderness Area, most of the contribution of PM<sub>2.5</sub> comes from a combination of windblown, fugitive and road dust

sources in Idaho and to a lesser degree, the same mix of sources in Oregon.

EPA is proposing to find that Oregon has appropriately identified the primary pollutants impacting its Class I areas. EPA is also proposing to find that the SIP contains an appropriate analysis of the impact of these pollutants in nearby Class I areas.

#### *E. Best Available Retrofit Technology (BART)*

##### 1. BART-Eligible Sources in Oregon

The first step of a BART evaluation is to identify all the BART-eligible sources within the State's boundaries. Table 10.2-1 in the Oregon Regional Haze SIP submittal presents the list of ten BART-eligible sources located in Oregon. These sources are: Amalgamated Sugar (Nyssa), Portland Gas and Electric (PGE) power plant (Boardman), Boise Paper Solutions (St. Helens), Georgia Pacific Wauna pulp mill (Clatskanie), PGE Beaver power plant (Clatskanie), Georgia Pacific pulp mill (Toledo), Pope and Talbot pulp mills (Halsey), SP Newsprint (Newberg), International Paper pulp mill (Springfield), and Kingsford charcoal production (Springfield).

##### 2. BART-Subject Sources in Oregon

The second step of a BART evaluation is to identify those BART-eligible sources that may reasonably be anticipated to cause or contribute to any impairment of visibility at any Class I area and are, therefore, subject to BART. As explained above, EPA has issued guidelines that provide States with guidance for addressing the BART requirements. 40 CFR Part 51 Appendix Y—Guidelines for BART determinations under the regional Haze Rule (BART Guidelines); *see also* 70 FR 39104 (July 6, 2005). The BART Guidelines describe how States may consider exempting some BART-eligible sources from further BART review based on dispersion modeling showing that the source contributes to impairment below a certain threshold amount. Oregon conducted dispersion modeling for the BART-eligible sources to determine the visibility impacts of these sources on Class I areas.

The BART Guidelines require States to set a contribution threshold to assess whether the impact of a single source is sufficient to cause or contribute to visibility impairment at a Class I area. Generally, States may not establish a contribution threshold that exceeds 0.5 dv impact. 70 FR at 39161. Oregon established a contribution threshold of 0.5 dv through negotiated rulemaking with industry, FLMs, and the public. In

its SIP submittal, Oregon notes that the 0.5 dv threshold is also consistent with the threshold used by all other States in the WRAP. Any source with an impact of greater than 0.5 dv in any Class I area, including Class I areas in other States, would be subject to a BART analysis and BART emission limitations.

Oregon established a contribution threshold of 0.5 dv based on the following reasons; (1) it equates to the 5% extinction threshold for new sources under the PSD New Source Review rules, (2) it is consistent with the threshold selected by other States in the West, (3) it represents the limit of perceptible change, and (4) there was no clear rationale or justification for selecting a lower level. EPA finds that these reasons alone do not provide sufficient basis for concluding that such a threshold is appropriate for Oregon. Nevertheless, based on the additional information described below, EPA proposes to approve the list of subject-to-BART sources in this SIP submittal.

In the BART Guidelines, EPA recommended that States "consider the number of BART sources affecting the Class I areas at issue and the magnitude of the individual sources' impacts. In general, a larger number of BART sources causing impacts in a Class I area may warrant a lower contribution threshold." 70 FR 39104, 39161 July 6, 2005. In developing its regional haze SIP, Oregon modeled the individual impacts of ten BART-eligible sources on Class I areas within a 300 km radius. (*See* Table 10-3.2-1 of the SIP submittal.) EPA's review of modeled impacts of the BART-eligible sources in Oregon finds there is only one group of Oregon BART-eligible sources, that collectively impact visibility at the same Class I area (Mt. Hood Wilderness Area), with a total impact greater than 1.0 dv (level defined as 'causing' visibility impairment). This group of sources consists of the Georgia Pacific Wauna pulp mill and PGE Beaver power plant in Clatskanie and Boise Paper Solutions in St. Helens. Two of these facilities, Georgia Pacific Wauna and PGE Beaver, have taken Federally Enforceable Permit Limits to limit their visibility impacts to 0.344 dv and to 0.357 dv, respectively at the Mt. Hood Wilderness Area. The remaining facility, Boise Paper Solutions, has a maximum of 0.367 dv impact at the Mt. Hood Wilderness Area. Since the combined contribution of these three sources will now be 1.068 dv, which is only slightly above the threshold of 'causing' visibility impairment, EPA is proposing to approve the 0.5 dv contribution threshold adopted by Oregon in its Regional Haze Plan.

To determine those sources subject-to-BART, Oregon used the CALPUFF dispersion model. The dispersion modeling was conducted in accord with the *BART Modeling Protocol*<sup>7</sup>. This Protocol was jointly developed by the States of Idaho, Washington, Oregon and EPA and has undergone public review. The Protocol was used by all three States in determining which BART-eligible sources are subject to BART. *See* appendix D.4 of the SIP submission for details of the modeling protocol, its application and results.

The following BART-eligible sources, based on CALPUFF modeling of 2003-2005 emissions, demonstrate impacts greater than 0.5 dv in one or more Class I areas, and were identified as subject to BART:

1. PGE Beaver Power Plant, Clatskanie
2. Georgia Pacific, Wauna Facility, Clatskanie
3. International Paper (formally Weyerhaeuser), Springfield
4. Amalgamated Sugar, Nyssa
5. PGE Boardman Power Plant, Boardman

##### 3. Federally Enforceable Permit Limits on Oregon Sources Otherwise Subject-to-BART

The following sources elected to be regulated by a Federally enforceable permit limit to reduce visibility impacts below the 0.5 dv impact threshold and thus are not subject-to-BART:

###### a. PGE Beaver Power Plant

PGE Beaver Power Plant is a 558 megawatt fossil fuel-fired, electrical-generating plant located in Clatskanie, Oregon. Visibility modeling for this facility shows an impact on three Class I areas over the 0.5 dv, with the highest impact of 0.68 dv at Olympic National Park in Washington. Condition 340-224-0070 of the Title V permit (#05-2520) for this facility, modified by the Oregon Department of Environmental Quality (ODEQ) on January 21, 2009, and included in the SIP submittal, establishes emission limits and the control technology to achieve these limits, so that the impact of emissions from this facility remain below a 0.5 dv at Olympic National Park and all other Class I areas.

To achieve the emission limits established in the Title V permit, the facility must use ultra-low sulfur diesel (ULSD) fuel (with no more than 0.0015% sulfur) in its oil-fired BART eligible units. The source must use only "pipe line quality" natural gas in the gas-fueled PWEU1 unit.

Compliance with emission limits will be determined by a combination of continuous emission monitors and other

record keeping and reporting requirements. Based on the fuel use restrictions established in the permit, the predicted maximum impact for this facility, based on visibility modeling, will be 0.414 dv at Mt. Rainier National Park (the most impacted Class I area) (See section 10.3.2, table 10.3.2-1, and Oregon's supplemental submittal, February 1, 2011). EPA proposes to find that in light of the Federally enforceable permit limit, this source is not subject-to-BART.

#### b. Georgia Pacific Wauna Mill

The Georgia Pacific Wauna Mill is a pulp and paper manufacturing plant located in Clatskanie, Oregon. Modeling conducted for this facility shows an impact at Olympic National Park of 0.57 dv. This facility elected to be regulated by an FEPL to limit its emission so that visibility impacts in any Class I area remain below 0.5 dv. The section titled "Emission Unit Specific Limits—Regional Haze Requirements" of Title V permit (#208850) for this facility, modified by ODEQ on December 2, 2010, and included in the SIP submittal, identifies emission limits and the methods for achieving these limits, so that emissions from this facility will not cause impairment above 0.5 dv.

To achieve the emission limits established by the permit, the mill has reduced its SO<sub>2</sub> emissions by (1) permanently reducing use of fuel oil in the Power Boiler, (2) discontinuing the use of fuel oil in the Lime Kiln until the Non-Condensable Gas Incinerator (NCGI) unit is shut down, and (3) limiting pulp production rate to 1,030 tons per day until the NCGI unit is shut down, at which time production rate will be limited to 1,350 tons per day. Compliance with emission limits will be determined by visible emission monitoring and source testing.

The maximum predicted impact for this facility will be 0.45 dv at Olympic National Park (See section 10.3.2, table 10.3.2-1, and Oregon's supplemental submittal, February 1, 2011). EPA proposes to find that in light of the FEPL, this source is not subject-to-BART.

#### c. International Paper

International Paper is a containerboard plant located in Springfield, Oregon. Modeling conducted for this facility shows an impact in nine Class I areas over the 0.5 dv. The highest impact of 1.45 dv occurs at the Three Sisters Wilderness Area. Condition 210 of Title V permit (#208850) for this facility, modified by Lane Regional Air Protection Agency on April 7, 2009, and included in the SIP

submittal, identifies emission limits and the methods for achieving these limits, so that the impact of emissions from this facility remain below a 0.5 dv impact.

To achieve the emission limits established by the permit, the plant has reduced its emissions of SO<sub>2</sub>, NO<sub>x</sub>, and PM by accepting limits on fuel usage and operation, and meeting a combined SO<sub>2</sub> and NO<sub>x</sub> daily emission limit based on a plant fuel use specific formula. The permit requires this facility to include the package boiler (EU-150B) emissions when demonstrating compliance with condition 210 of the permit until the source submits a notice of completion of No. 4 recovery boiler mud and steam drum replacement. Compliance with emission limits will be determined by testing the sulfur concentrations in the natural gas and fuel oil used by this facility at specified frequencies, and using the appropriate emission factors for these fuels to calculate estimate daily SO<sub>2</sub> and NO<sub>x</sub> emissions. With the Federally enforceable permit limit, the maximum predicted impact for this facility will be 0.44 dv at Three Sisters Wilderness Area (See section 10.3.2, table 10.3.2-1, and Oregon's supplemental submittal, February 1, 2011).

EPA proposes to find that in light of the Federally enforceable permit limit this source is not subject-to-BART.

#### d. Amalgamated Sugar Plant

Amalgamated Sugar Plant is a sugar beet processing plant located in Nyssa, in eastern Oregon, near the Idaho border. This plant is currently shutdown and has no identified date to resume operations. However, since its air quality permit is still valid, BART modeling was conducted for the plant and an impact of 0.514 dv was identified at the Eagle Cap Wilderness Area. In the event this source resumes operation in the future, Oregon Department of Environmental Quality (ODEQ) will require that this facility be subject to a Federally enforceable permit limit in its Title V permit, or conduct a BART analysis and install BART prior to resuming operation. The Federally enforceable permit limit will consist of an emission limit on the Foster-Wheeler boiler at this facility, which will ensure visibility impact remains under the 0.5 dv threshold. See OAR 340-223-0040. EPA proposes to find that in light of these provisions, this source is not currently subject- to-BART.

#### 4. BART for PGE Boardman

The PGE power plant near Boardman, Oregon, (PGE Boardman) is a 584 MW coal-fired electric utility and is BART-eligible because it is was constructed

between 1962 and 1977, is a fossil-fuel fired steam electric generating plant of more than 250 million British thermal units (mm/Btu) per hour heat input, and has potential emissions greater than 250 tons per year of sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and particulate matter (PM). PGE Boardman commenced construction in 1975 and began operation in 1980. The PGE Boardman boiler is a Foster Wheeler dry bottom, opposing-wall fired design, controlled with first generation low NO<sub>x</sub> burners and overfire air. An electrostatic particulator currently controls PM emissions.

In July 2009, ODEQ conducted a BART analysis and determined that BART for PGE Boardman, was a combination of new low-NO<sub>x</sub> burners/modified overfire air (NLNB/MOFA) for NO<sub>x</sub> and Semi-Dry Flue Gas Desulfurization (SDFGD) for SO<sub>2</sub>, with a pulse jet fabric filter for PM. ODEQ also determined that Selective Catalytic Reduction (SCR) would increase control efficiency for NO<sub>x</sub> emissions and was reasonable to assure further reasonable progress. Based on the assumption that the facility would operate for at least 30 years (until 2040), this BART analysis determined these controls would be cost effective. Oregon included this BART determination in the Regional Haze Plan it submitted to EPA in July 2009. See Oregon Regional Haze Plan dated July 16, 2009, and OAR 340-223-0010 through OAR 340-223-0050, dated June 30, 2009. On September 11, 2009, EPA informed ODEQ that this SIP submission was complete.

In a letter from PGE to ODEQ dated October 22, 2010, PGE requested that ODEQ reopen the Regional Haze BART rulemaking to consider an alternative BART approach for PGE Boardman. This alternative approach would allow PGE Boardman to commit to cease burning coal by December 31, 2020, and in the interim operate with less expensive control technology. This alternative shortens the expected useful life of the coal-burning Foster Wheeler boiler by 20 years compared to the life expectancy relied on in the original BART determination. This alternative would also allow the boiler to be restarted using an alternative fuel at a future date. (A re-start of the boiler with an alternate fuel source would then require PGE to comply with all relevant requirements, including as applicable the requirement to apply for a Prevention of Significant Deterioration (PSD) construction permit which will require an analysis and permitted emission limits that represent Best Available Control Technology (BACT) before construction could commence.)

Based on PGE's request, ODEQ performed an additional BART analysis for PGE Boardman assuming a shorter life expectancy. ODEQ evaluated visibility improvements in Class I areas of all technically feasible emission control technologies and determined the cost effectiveness of each technology assuming operation until 2020. See BART Guidelines Section IV. D. 4.(k) (explaining how to take into account the project's remaining useful life when calculating control costs).

ODEQ's BART analysis for all technically feasible control technologies for the Foster-Wheeler boiler is described in Appendices D-6 and D-7 of the revised Oregon Regional Haze SIP submitted December 2010. ODEQ determined that the technically feasible controls for NO<sub>x</sub> were the following: new low-NO<sub>x</sub> burners with modified overfire air (NLNB/MOFA); selective non-catalytic reduction (SNCR) with NLNB/MOFA; and selective catalytic reduction (SCR). ODEQ determined that the technically feasible controls for SO<sub>2</sub> for were the following: reduced-sulfur coal restriction (RSCR); Direct Sorbent Injection (DSI); semi-dry flue gas desulfurization (SDFGD); and wet flue gas desulfurization (WFGD). The technically feasible controls evaluated for PM emission control were the following: pulsed jet fabric filter (PJFF) and electrostatic precipitation (ESP). An ESP is already installed and operating at PGE Boardman.

After identifying all technically feasible technologies to control the various pollutants ODEQ determined the emission limits achievable by each technology. The following results (for NO<sub>x</sub>, SO<sub>2</sub> and PM) are shown in the Control Effectiveness table in Appendix D-7 of the SIP submittal. The emission limits for NO<sub>x</sub> would be:

- NLNB/MOFA—0.23 lb/mmBtu
- SNCR—0.19 lb/mmBtu
- SCR—0.07 lb/mmBtu

The emission limits for SO<sub>2</sub> would be:

- RSCR—0.6 lb/mmBtu
- DSI—0.4 lb/mmBtu
- SDFGD—0.12 lb/mmBtu
- WFGD—0.09 lb/mmBtu

The emission limits for PM would be:

- PJFF—0.012 lb/mmBtu
- ESP—0.017 lb/mmBtu

ODEQ next evaluated the cost effectiveness, the energy impacts, and non-air quality environmental impacts of each technically feasible control. The cost effectiveness of NO<sub>x</sub> control alternatives were:

- NLNB/MOFA—\$1,263/ton
- NLNB/MOFA/SNCR—\$1,816/ton
- NLNB/MOFA/SCR—\$8,337/ton

The cost effectiveness of SO<sub>2</sub> control alternatives were:

- DSI-1 (referred to as the initial phase of DSI operation)—\$2,458/ton
- SDFGD—\$5,535/ton (including the cost of installing a PJFF)
- WFGD—\$7,631/ton

Included in the cost effectiveness values presented above are the direct energy and non-air costs. The direct energy impacts for each control technology were based on the auxiliary power consumption of the control technology and the additional draft system power consumption necessary to overcome the control technology resistance in the flue gas flow path. Indirect energy impacts, such as the energy to produce raw materials used for the control technology were not included in the cost estimates.

ODEQ identified and considered the following potential non-air quality concerns for each technology: NLNB/MOFA—increased carbon monoxide air emissions and boiler tube slagging; SNCR—ammonia option has potential safety issues, urea option produces CO<sub>2</sub>, ammonia slip, and ammonia bisulfate formation (air preheater fouling); SCR—ammonia handling safety, SO<sub>2</sub> to SO<sub>3</sub> conversion and air preheater corrosion, ammonium bisulfate formation (air preheater fouling), soot blowing to manage ash deposition in the catalyst, reliability of catalyst in high temperature application, and ammonia slip; DSI—potential interference with mercury control system, creation of hazardous waste, requirement for increased maintenance of the ducts and ESP, and increase in particulate emissions; SDFGD—fugitive emissions from raw material and byproduct handling; WFGD—fugitive emissions from raw material and byproduct handling, persistent water plume from stack, material corrosion, dewatering, and addition of PJFF for mercury control. ODEQ concluded that in spite of the potential concerns identified, each of these control technologies are proven in use at other coal-fired boilers and that these concerns could be adequately addressed with a well-designed system. The only exception is SNCR in combination with DSI, which may result in additional PM emissions due to ammonia slip. ODEQ then determined the visibility improvements that could be achieved over current conditions with each combination of technically feasible emission control technologies in the Mt. Hood Wilderness Area, the Class I area most impacted by PGE Boardman. (See the Control Effectiveness table in Appendix D-7 of the SIP submittal.) The visibility improvements were:

- NLNB/MOFA—1.44 dv
- NLNB/MOFA/SNCR—1.62 dv

- NLNB/MOFA/SCR—2.17 dv
- RSCR—0.43 dv
- DSI-1—0.84 dv
- SDFGD—1.24 dv
- WFGD—1.19 dv
- PJFF—<0.1 dv

As explained in the 2010 revised BART analysis, and after full public notice and comment, ODEQ determined BART emission limits appropriate for the PGE Boardman facility based on it ceasing to burn coal by December 31, 2020. The specific emission limits and associated control technologies are explained below.

Specifically ODEQ determined that BART for NO<sub>x</sub> is 0.23 lbs/mmBtu based on NLNB/MOFA. ODEQ found that the technology is cost effective and provides significant visibility improvement (≤1.0 dv in Mt. Hood wilderness area), as well as significant improvement in 11 other Class I areas. Although the technology option of NLNB/MOFA plus selective non-catalytic reduction (SNCR) was cost effective (\$1,816/ton), ODEQ rejected this technology option because adding SNCR only provided an additional 0.18 dv of visibility improvement over NLNB/MOFA at the Mt. Hood Wilderness Area, and because of concerns about excess ammonia emissions (commonly referred to as ammonia slip) which may result in increased rates of secondary particulate matter in the form of ammonium sulfate. As shown in the Control Effectiveness table in Appendix D-7, the NO<sub>x</sub> emission reduction attributed to SNCR was only 17% better than that achieved with NLNB/MOFA alone.

ODEQ determined BART for SO<sub>2</sub> is 0.40 lbs/mmBtu based on initial operational efficiency of DSI (DSI-1). This determination was made because DSI-1 is cost effective at \$3,370/ton, will provide significant visibility improvement (> 0.5dv) in the Mt. Hood Wilderness Area, and provide significant improvement in 11 other Class I areas. The cost effectiveness value that ODEQ calculated for SDFGD was \$5,535/ton. The incremental cost effectiveness of SDFGD compared to DSI-1 is about \$7,200/ton. ODEQ stated that SDFGD is not considered to be BART because it is not cost effective when considering a useful life expectancy of 2020.

ODEQ determined BART for PM is 0.40 lb/mmBtu, which is the current PM emission limit for PGE Boardman with the existing ESP system. ODEQ's analysis concluded that the alternative PM control technology, PJFF, would only reduce PM emissions by 122 ton/year compared to 2007 actual PM emissions, and would not be cost effective at \$186,102/ton (see

Addendum to DEQ BART Report for the Boardman Power Plant, dated November 11, 2010).

ODEQ also determined that further operational refinements to the DSI system or the use of improved sorbent (called DSI-2) could be achieved by 2018, resulting in further reductions in SO<sub>2</sub> emissions at that time. Therefore, ODEQ identified a goal of 0.30 lbs/mmBtu for SO<sub>2</sub> emissions to achieve further reasonable progress by July 1, 2018. This goal would be achieved with operational refinements to the DSI system or the use of an improved sorbent that may be available in the future.

EPA reviewed the BART determination for PGE Boardman and found that ODEQ appropriately followed the required steps for determining BART as described in the BART Guidelines Section IV. D. These steps are: (1) Identify all available retrofit control technologies; (2) eliminate technically infeasible options; (3) evaluate control effectiveness of remaining control technologies; (4) evaluate impacts and document results; and (5) evaluate visibility impacts. EPA proposes to find that the methods used by ODEQ for determining cost, cost effectiveness, energy and non air quality impacts, and visibility improvement of BART controls for the Foster Wheeler boiler at the PGE Boardman facility for a 2020 plant lifetime are consistent with the RHR and EPA guidance. ODEQ has also used an acceptable methodology for determining the impacts of remaining useful facility life on the cost and cost effectiveness of BART controls for the 2020 plant lifetime. The emission limits, and schedules for meeting them, are identified in the Oregon Regional Haze Rules, OAR 340-223-0030. (State effective December 9, 2010). Therefore, EPA proposes to approve Oregon's BART determination for PGE Boardman.

#### IV. EPA's Analysis of Oregon's Regional Haze Rules

Oregon included in its Regional Haze SIP submittal revisions to the Oregon Regional Haze Rules (OAR 340-223-0010 through 340-223-0080), adopted by the State on December 9, 2010. These rules, among other things, establish emission limits on certain sources that significantly contribute to visibility impairment in Oregon Class I areas. Additionally, these rules establish the BART emission limits analyzed and described in section II.D.4. above for the PGE Boardman facility. As explained in more detail below, the rules related to PGE Boardman establish a scenario whereby PGE would cease burning coal in the Boardman Foster Wheeler boiler

no later than 2020 and perhaps as early as 2014. Additionally, pursuant to OAR 340-223-0050, upon EPA's approval of the rules, the provisions containing alternative BART emission limits based on the facility continuing to burn coal until at least 2040 would be repealed as a matter of law. See Oregon Regional Haze SIP Submittal Attachment 1.1 pgs 5-6. <http://www.deq.state.or.us/aq/pge.htm> (ODEQ Web page describing the new regulations for PGE Boardman).

#### OAR 340-223-0010

This rule explains that the purpose of OAR 340-223-0020 through 340 223-0080 is to establish requirements for certain sources emitting air pollutants that reduce visibility and contribute to regional haze in Class I areas for the purpose of implementing Best Available Retrofit Technology requirements and other requirements associated with the Federal Regional Haze Rules in 40 CFR 51.308.

#### OAR 340-223-0020

This rule includes the following definitions, "BART-eligible source", "Best Available Retrofit Technology (BART)", "Deciview", and "Subject to BART". These definitions are consistent with their definitions in the Federal RHR. Two additional definitions, "Dry sorbent injection pollution control system" and "Ultra-low sulfur coal" are consistent with industry practices.

#### OAR 340-223-0030

This rule identifies BART emission limits, and other requirements pursuant to the Federal regional haze rule, and the schedule for meeting these limits for the Foster Wheeler boiler at the PGE Boardman facility. This rule also includes the requirement that the Foster Wheeler boiler facility permanently cease burning coal by no later than December 31, 2020. OAR 340-223-0030(1)(e). In this rule, the specific emission limits and schedule for these limits are:

1. NO<sub>x</sub>—Between July 1, 2011 and December 31, 2020, NO<sub>x</sub> emissions must not exceed 0.23 lbs/mmBtu (pounds per million British thermal units) on a 30-day rolling average. However, if PGE demonstrates to ODEQ by December 31, 2011, that the 0.23 lbs/mmBtu cannot be achieved with combustion controls, ODEQ may, by order, grant an extension to July 1, 2013.

2. SO<sub>2</sub>—Between July 1, 2014 and June 30, 2018, SO<sub>2</sub> emissions must not exceed 0.4 lbs/mmBtu and between July 1, 2018 and December 31, 2020, SO<sub>2</sub> emissions must not exceed 0.30 lb/mmBtu. However, if PGE cannot achieve 0.4 lbs/mmBtu by July 1, 2014, based on

the reduction of SO<sub>2</sub> emissions to the maximum extent feasible through the use of dry sorbent injection, the limits would be the lowest achievable with DSI, but no higher than 0.55 lbs/mmBtu by July 1, 2014. The SO<sub>2</sub> emission limit is lowered to 0.30 lb/mmBtu by July 1, 2018. This limit is more stringent than the 0.40 lb/mmBtu BART limit and was adopted to achieve further reasonable progress in Class I areas. ODEQ believes that this limit could be met by further refinements to the DSI system (called "DSI-2"), or DSI refinements in combination with ultra-low sulfur coal.

3. PM—Between July 1, 2014 and December 31, 2020, PM emissions must not exceed 0.040lb/mmBtu heat input.

OAR 340-223-0030 also explains that notwithstanding the definition of netting basis in OAR 340-200-0020, and the process for reducing plant site emission limits in OAR 340-222-0043, the netting basis and the plant site emission limitations (PSELs) for the Foster Wheeler boiler are reduced to zero upon the date on which the boiler permanently ceases burning coal. Prior to that date the netting basis and PSELs for the boiler apply only to physical changes or changes in the method of operation of the source for the purposes of complying with the emission limits applicable to the boiler.

#### OAR 340-223-0040

This rule explains that a BART-eligible source, which would be subject-to-BART based on visibility modeling, may accept a Federally enforceable permit limit to reduce the source's emissions and prevent the source from being subject-to-BART. It also explains that any source that accepts a Federal enforceable permit limit and subsequently proposes to terminate this limit, such that an increase in emissions would make the source subject-to-BART, must submit a BART analysis to ODEQ and install BART as determined by ODEQ prior to terminating the Federally enforceable permit limits. This rule also explains that the Foster Wheeler boiler at the Amalgamated Sugar Company in Nyssa, Oregon, is currently not operating, and that prior to resuming operation the owner or operator must either (1) submit a BART analysis and install BART as determined by ODEQ, or (2) obtain and comply with a Federally enforceable permit limit to ensure that the source's emissions will not cause the source to be subject-to-BART.

#### OAR 340-223-0050

OAR 340-223-0050(1) provides that the owner and operator of the Foster Wheeler boiler at the PGE Boardman

facility may elect to comply with OAR 340-223-0060 and OAR 340-223-0070, or with OAR 340-223-0080, in lieu of OAR 340-223-0030. OAR 340-223-0060 and 0070 provide emission limits based on coal operation until 2040, and OAR 340-223-0080 provides emission limits based on PGE Boardman permanently ceasing to burn coal within five years of EPA's approval of OAR chapter 340, division 223. Any of these alternatives are available only if the owner or operator provides written notification to the ODEQ Director by July 1, 2014 of which alternative it has chosen to comply with. Additionally, as provided in OAR 340-223-0050(4), if EPA approves a SIP revision incorporating OAR 340-223-0030 (discussed above concerning BART requirements based on PGE permanently ceasing to burn coal in the Foster Wheeler boiler by December 31, 2020) compliance with OAR 340-223-0060 and 0070 is no longer an alternative. Accordingly, EPA's approval of OAR 340-223-0030, as proposed in this action, would eliminate the alternative BART requirements allowed under OAR 340-223-0060 and 340-223-0070.

*OAR 340-223-0060 and OAR 340-223-0070*

OAR 340-223-0060 identifies the SO<sub>2</sub>, NO<sub>x</sub>, and PM BART emission limits and the schedules for meeting these limits based upon coal operation of the Foster Wheeler boiler at the PGE Boardman facility until 2040. OAR 340-223-0070 identifies additional NO<sub>x</sub> emission limits that must be met by July 1, 2017 to achieve further reasonable progress for the PGE Boardman facility based on operation of the Foster Wheeler boiler until 2040. In this action, EPA is proposing to approve a SIP revision incorporating OAR 340-223-0030. Thus, if or when this proposal is finalized, as provided in OAR 340-223-0050 and explained above, OAR 340-223-0060 and -0070 would be repealed as a matter of law and compliance with them would no longer be an alternative.

*OAR 340-0080*

This rule, which is an alternative to OAR 340-223-0030, sets NO<sub>x</sub> emission limits and schedules for meeting these limits for the Foster Wheeler boiler at the PGE Boardman facility. As explained above, pursuant to OAR 340-223-0050(2), this alternative is based on the boiler permanently ceasing to burn coal no later than five years after EPA's approval of the Oregon Regional Haze Plan that incorporates OAR chapter 340, division 223. As in described above for OAR-340-223-0030, this provision also

describes the process for establishing the netting basis if this alternative is chosen.

In summary, EPA is proposing to find that Oregon's use of Federal enforceable permit limits to reduce emissions of four sources below the 0.5 dv visibility impact contribution threshold, is an acceptable means of exempting a source from being subject-to-BART. Additionally, based on the analysis described in section III.E. 4. above, EPA proposes to find that the rules relating to PGE Boardman are approvable. EPA proposes to approve OAR 340-223-0010 through 340-223-0080.

**V. EPA's Analysis of Whether the Oregon Regional Haze SIP Submittal Meets Interstate Transport Requirements**

Section 110(a)(2)(D)(i)(II) of the Act requires SIP revisions to "contain adequate provisions \* \* \* prohibiting \* \* \* any source or other types of emission activity within the State from emitting any air pollutant in amounts which will \* \* \* interfere with measures required to be included in the applicable implementation plan for any other State \* \* \* to protect visibility." EPA is proposing to find that the Oregon SIP submittal of December 2010, and the supplemental SIP submittal dated February 1, 2011, to address regional haze contain adequate provisions to meet these "good neighbor" provisions of section 110(a)(2)(D)(i)(II) with respect to visibility.

As an initial matter, EPA notes that section 110(a)(2)(D)(i)(II) does not explicitly specify how EPA should ascertain whether a State's SIP contains adequate provisions to prevent emissions from sources in that State from interfering with measures required in another State to protect visibility. Thus, the statute is ambiguous on its face, and EPA must interpret that provision.

Our 2006 Guidance recommended that a State could meet the visibility prong of the transport requirements for section 110(a)(2)(D)(i)(II) by submission of the regional haze SIP, due in December 2007. EPA's reasoning was that the development of the regional haze SIPs was intended to occur in a collaborative environment among the States, and that through this process States would coordinate on emissions controls to protect visibility on an interstate basis. In fact, in developing their respective reasonable progress goals, WRAP States consulted with each other through the WRAP's work groups. As a result of this process, the common understanding was that each State would take action to achieve the

emissions reductions relied upon by other States in their reasonable progress demonstrations under the RHR. This interpretation is consistent with the requirement in the regional haze rule that a State participating in a regional planning process must include "all measures needed to achieve its apportionment of emission reduction obligations agreed upon through that process." 40 CFR 51.308(d)(3)(ii).

We believe that with approval of the portions of the Oregon SIP that we are proposing to take action on today, Oregon's SIP will also contain adequate provisions to prevent interstate transport that would interfere with the measures required in other States to protect visibility. Chapter 13 of the Oregon SIP submittal explains the consultation process followed by Oregon and its neighboring States to meet the requirements in the regional haze rule to address the interstate transport of visibility impairing pollutants, and the outcome of that process. Section 13.2.3 indicates that Oregon and neighboring States agreed that "no major contributions were identified that supported developing new interstate strategies, mitigation measures, or emissions reductions obligations," and that each State could achieve its share of emission reductions through the implementation of BART and other existing measures in State regional haze plans. Additionally, when ODEQ subsequently revised its BART determination for PGE Boardman in 2010, it specifically consulted with Idaho and Washington, the two States with Class I areas identified as impacted by the PGE Boardman plant. These States confirmed that they support the revisions and indicated that they did not anticipate the difference in emissions between the 2009 BART determination for Boardman and the 2010 BART determination to have any material adverse effect on the State's reasonable progress goals for 2018. See Oregon Supplemental SIP Submittal. Oregon also agreed that future consultation would address any new strategies or measures needed. The measures addressing BART in the Oregon SIP submittal accordingly would appear to be adequate to prevent emissions from sources in Oregon from interfering with the measures required to be in the regional haze SIPs of its neighbors.

This conclusion is consistent with the analysis conducted by the WRAP, an analysis that provides an appropriate means for further evaluating whether emissions from sources in a State are interfering with the visibility programs of other States, as contemplated in

section 110(a)(2)(D)(i)(II). As described below, EPA's evaluation shows that the BART measures of the Regional Haze SIP submittal, that we are proposing to approve today, are generally consistent with the emissions reductions assumptions of the WRAP modeling from Oregon sources. Accordingly, EPA is proposing to approve Oregon's SIP as ensuring that emissions from Oregon do not interfere with the reasonable progress goals of other States.

In developing their visibility projections using photochemical grid modeling, the WRAP States assumed a certain level of emissions from sources within Oregon. The visibility projection modeling was in turn used by the States to establish their own reasonable progress goals. We have reviewed the WRAP photochemical modeling emissions projections used in the demonstration of reasonable progress towards natural visibility conditions and compared them to the emissions limits that will result from the imposition of BART on sources in Oregon. We have concluded that with the emissions reductions achieved by these measures, the emissions from Oregon sources in the projected inventory for 2018 (which included both reductions and increases) will be approximately equal to that assumed in the WRAP analysis.

As a result of the foregoing determination, EPA is proposing to find that the Oregon Regional Haze SIP submission contains the emission reductions needed to achieve Oregon's share of emission reductions agreed upon through the regional planning process. As reflected in its Regional Haze SIP submittal, Oregon committed to achieve these emission reductions to address impacts on visibility on Class I areas in surrounding States. The portions of the Oregon Regional Haze SIP that we are proposing to approve ensure that emissions from Oregon will not interfere with the reasonable progress goals for neighboring States' Class I areas. EPA is accordingly proposing to find that these emission reductions also meet the requirements of section 110(a)(2)(D)(i)(II) of the Act with respect to the visibility prong for the 1997 8-hour ozone and 1997 PM<sub>2.5</sub> NAAQS.

#### VI. What action is EPA proposing?

EPA is proposing to approve portions of the Oregon Regional Haze plan, submitted on December 20, 2010, and as supplemented on February 1, 2011, as meeting the requirements set forth in section 169A of the Act and in 40 CFR 51.308(e) regarding BART. EPA is also proposing to approve the Oregon

submittal as meeting the requirements of 51.308(d)(2) and (4)(v) regarding the calculation of baseline and natural conditions for all 12 Class I areas in Oregon, and the statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any mandatory Class I Federal Area. In addition, EPA is proposing to find that the BART measures in the Oregon Regional Haze plan meet the requirements of section 110(a)(D)(ii)(II) of the CAA with respect to the 1997 8-hour ozone and 1997 PM<sub>2.5</sub> NAAQS. Finally, EPA is proposing to approve OAR 340-223-0010 through 340-223-0080 [Regional Haze Rules].

#### VII. Oregon Notice Provision

Oregon Revised Statute 468.126, prohibits ODEQ from imposing a penalty for violation of an air, water, or solid waste permit unless the source has been provided five days' advanced written notice of the violation and has not come into compliance or submitted a compliance schedule within that five-day period. By its terms, the statute does not apply to Oregon's Title V program or to any program if application of the notice provision would disqualify the program from Federal delegation. Oregon has previously confirmed that, because application of the notice provision would preclude EPA approval of the Oregon SIP, no advance notice is required for violation of SIP requirements.

EPA is taking no action on chapter 340, division 200, section 0040, State of Oregon Clean Air Act Implementation Plan, because this section simply describes the State's procedures for adopting its SIP and incorporates by reference all of the revisions adopted by the Environmental Quality Council for approval into the Oregon SIP (as a matter of State law).

#### VIII. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this proposed action merely approves State law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law. For that reason, this proposed action:

- Is not a "significant regulatory action" subject to review by the Office

of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);

- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);

- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);

- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4);

- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);

- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and

- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have Tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on Tribal governments or preempt Tribal law.

#### List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Visibility, and Volatile organic compounds.

Dated: February 28, 2011.

**Dennis McLerran,**

*Regional Administrator, Region 10.*

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