

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
STANDARDS AND REGULATIONS  
CHAPTER 6, Section 9, BART

Section 9. Best available retrofit technology (BART).

(a) **Applicability.** The provisions of this regulation apply to existing stationary facilities, as defined in Section 9(b) of this chapter.

(b) **Definitions.**

**“Adverse impact on visibility”** means visibility impairment which interferes with the management, protection, preservation, or enjoyment of the visitor’s visual experience of the Federal Class I area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency and time of visibility impairments, and how these factors correlate with 1) times of visitor use of the Federal Class I area, and 2) the frequency and timing of natural conditions that reduce visibility. This term does not include effects on integral vistas.

**“Applicable technology”** means a commercially available control option that has been or is soon to be deployed (e.g., is specified in a permit) on the same or a similar source type or a technology that has been used on a pollutant-bearing gas stream that is the same or similar to the gas stream characteristics of the source.

**“Available technology”** means that a technology is licensed and available through commercial sales.

**“Average cost effectiveness”** means the total annualized costs of control divided by annual emissions reductions (the difference between baseline annual emissions and the estimate of emissions after controls). For the purposes of calculating average cost effectiveness, baseline annual emissions means a realistic depiction of anticipated annual emissions for the source. The source or the Division may use State or Federally enforceable permit limits or estimate the anticipated annual emissions based upon actual emissions from a representative baseline period.

**“BART alternative”** means an alternative measure to the installation, operation, and maintenance of BART that will achieve greater reasonable progress toward national visibility goals than would have resulted from the installation, operation, and maintenance of BART at BART-eligible sources within industry source categories subject to BART requirements.

**“Best available retrofit technology (BART)”** means an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant that is emitted by an existing stationary facility. The emission limitation must be established, on a case-by-case basis, taking into

consideration the technology available, the costs of compliance, the energy and non air quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source or unit, the remaining useful life of the source or unit, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

**“Deciview”** means a measurement of visibility impairment. A deciview is a haze index derived from calculated light extinction, such that uniform changes in haziness correspond to uniform incremental changes in perception across the entire range of conditions, from pristine to highly impaired. The deciview haze index is calculated based on the following equation (for the purposes of calculating deciview, the atmospheric light extinction coefficient must be calculated from aerosol measurements):

$$\text{Deciview haze index} = 10 \ln_e (b_{\text{ext}}/10 \text{ Mm}^{-1})$$

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

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

(i) Fossil fuel-fired steam electric plants of more than 250 million British thermal units (BTU) per hour heat input that generate electricity for sale.

(A) Boiler capacities shall be aggregated to determine the heat input of a plant.

(B) Includes plants that co-generate steam and electricity and combined cycle turbines.

(ii) Coal cleaning plants (thermal dryers).

(iii) Kraft pulp mills.

(iv) Portland cement plants.

(v) Primary zinc smelters.

(vi) Iron and steel mill plants.

(vii) Primary aluminum ore reduction plants.

(viii) Primary copper smelters.

(ix) Municipal incinerators capable of charging more than 250 tons of refuse per day.

(x) Hydrofluoric, sulfuric, and nitric acid plants.

(xi) Petroleum refineries.

(xii) Lime plants.

(xiii) Phosphate rock processing plants. Includes all types of phosphate rock processing facilities, including elemental phosphorous plants as well as fertilizer production plants.

(xiv) Coke oven batteries.

(xv) Sulfur recovery plants.

(xvi) Carbon black plants (furnace process).

(xvii) Primary lead smelters.

(xviii) Fuel conversion plants.

(xix) Sintering plants.

(xx) Secondary metal production facilities. Includes nonferrous metal facilities included within Standard Industrial Classification code 3341, and secondary ferrous metal facilities in the category "iron and steel mill plants".

(xxi) Chemical process plants. Includes those facilities within the 2-digit Standard Industrial Classification 28, including pharmaceutical manufacturing facilities.

(xxii) Fossil fuel boilers of more than 250 million BTUs per hour heat input.

(A) Individual boilers greater than 250 million BTU/hr, considering federally enforceable operational limits.

(B) Includes multi-fuel boilers that burn at least fifty percent fossil fuels.

(xxiii) Petroleum storage and transfer facilities with a capacity exceeding 300,000 barrels.

(A) 300,000 barrels refers to total facility-wide tank capacity for tanks put in place after August 7, 1962 and in existence on August 7, 1977.

(B) Includes gasoline and other petroleum-derived liquids.

(xxiv) Taconite ore processing facilities.

(xxv) Glass fiber processing plants.

(xxvi) Charcoal production facilities. Includes charcoal briquette manufacturing and activated carbon production.

**“Incremental cost effectiveness”** means the comparison of the costs and emissions performance level of a control option to those of the next most stringent option, as shown in the following formula:

$$\text{Incremental Cost Effectiveness (dollars per incremental ton removed)} = [(\text{Total annualized costs of control option}) - (\text{Total annualized costs of next control option})] \div [(\text{Next control option annual emissions}) - (\text{Control option annual emissions})]$$

**“In existence”** means that the owner or operator has obtained all necessary preconstruction approvals or permits required by Federal, State, or local air pollution emissions and air quality laws or regulations and either has 1) begun, or caused to begin, a continuous program of physical on-site construction of the facility or 2) entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the facility to be completed in a reasonable time.

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

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

**“Natural conditions”** means naturally occurring phenomena that reduce visibility as measured in terms of light extinction, visual range, contrast, or coloration.

**“Plant”** means all emissions units at a stationary source.

**“Potential to emit”** means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or

the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

***“Visibility-impairing air pollutant”*** includes the following:

- (i) Sulfur dioxide (SO<sub>2</sub>);
- (ii) Nitrogen oxides (NO<sub>x</sub>); and
- (iii) Particulate matter. (PM<sub>10</sub> will be used as the indicator for particulate matter. Emissions of PM<sub>10</sub> include the components of PM<sub>2.5</sub> as a subset).

***(c) Guidelines for BART Determinations.***

(i) The U.S. Environmental Protection Agency regulations contained in 40 CFR part 51, Appendix Y, are incorporated by reference into these regulations. The specific documents containing the complete text of the regulations are found in 40 CFR part 51, Appendix Y, as published on July 6, 2005 in the Federal Register beginning on page 39104, not including later amendments. Copies of the July 6, 2005 materials can be obtained from the Department of Environmental Quality, Division of Air Quality, 122 W. 25<sup>th</sup> Street, Cheyenne, Wyoming 82002.

(ii) The owner or operator of a fossil fuel-fired steam electric plant with a generating capacity greater than seven hundred fifty megawatts of electricity shall comply with the requirements of 40 CFR part 51, Appendix Y. All other facility owners or operators shall use Appendix Y as guidance for preparing their best available control retrofit technology determinations.

***(d) Identification of Sources Subject to BART.***

(i) Identification of sources subject to BART shall be performed by the Air Quality Division in accordance with EPA’s guidelines for BART determinations under the regional haze rule 40 CFR part 51, Appendix Y, and incorporated by reference under Section 9(c). A BART-eligible source is subject to BART unless valid air quality dispersion modeling demonstrates that the source will not cause or contribute to visibility impairment in any Class I area.

(A) A single source that is responsible for a 1.0 deciview change or more is considered to “cause” visibility impairment in any Class I area.

(B) A single source that is responsible for a 0.5 deciview change or more is considered to “contribute” visibility impairment in any Class I area.

(C) A single source is exempt from BART if the 98<sup>th</sup> percentile daily change in visibility, as compared against natural background conditions, is less than

0.5 deciviews at all Class I federal areas for each year modeled and for the entire multi-year modeling period.

(ii) The Division will provide written notice to each source determined to be subject to BART.

**(e) BART Requirements.**

**(i) Submission of Best Available Retrofit Technology (BART) Permit Application.** The owner or operator of each source subject to BART as determined under Section 9(d), shall submit a BART permit application to the Division. The permit application shall be submitted according to a schedule determined by the Division, but no later than December 15, 2006. Sources with a potential to emit less than 40 tons per year SO<sub>2</sub> or NO<sub>x</sub> or less than 15 tons per year PM<sub>10</sub> may exclude those de minimis level pollutants from the BART analysis. The BART permit application shall include:

(A) The name and address (physical location) of the existing stationary facility subject to BART.

(B) A brief description of the source and identification of any listed source categories in which it is included.

(C) Information on de minimis levels if pollutants are excluded from the analysis.

(D) An analysis of control options performed in accordance with 40 CFR part 51, Appendix Y, IV.

(E) A proposal and justification for BART emission limits and control technology that reflect the BART requirements established in 40 CFR part 51, Appendix Y.

(F) A description of the proposed emission control systems, including the estimated control efficiencies.

(G) A schedule to install and operate BART.

(H) Additional relevant information as the Administrator may request.

**(ii) Administrative Procedures for Review of a BART Permit Application.** The administrative procedures for review shall follow the procedures specified in Chapter 6, Section 2(g) of these regulations.

**(iii) Proposed Permits.** The Administrator shall prepare a proposed permit following the Division's review of the BART permit application. The

Administrator may approve, or amend the proposed emission limits, BART technology, and compliance schedule. Any proposed permit shall specify any notification, operation and maintenance, performance testing, monitoring, reporting and recordkeeping requirements determined by the Administrator to be reasonable and necessary.

(iv) **Opportunity for Public Comment.** The opportunity for public comment shall follow the procedures specified in Chapter 6, Section 2(m) for permit review.

(v) **Modifications to BART Permits.** Any source seeking to modify the BART determination for that facility must obtain the Administrator's approval.

(vi) **Operating Permit Requirements.** BART requirements established pursuant to any BART permit issued under this section shall be included in a Chapter 6, Section 3 Operating Permit according to the procedures established in Chapter 6, Section 3.

(vii) **Fees.** Persons applying for a permit under this section shall pay a fee to cover the Department's cost of reviewing and acting on permit applications in accordance with Chapter 6, Section 2(o).

(viii) **Installation of Best Available Retrofit Technology.** The owner or operator of any source required to operate under a BART permit issued under Section 9(e)(iii), shall install and operate best available retrofit technology unless an alternative to the installation of BART as specified under Section 9(f) has been approved by the Division. Any control equipment required under a permit issued in this section shall be installed and operating as expeditiously as practicable but in no event later than five years after the United States Environmental Protection Agency's approval of Wyoming's State Implementation Plan revision for Regional Haze.

(ix) **Operation and Maintenance of Best Available Retrofit Technology.** The owner or operator of a facility required to install best available retrofit technology under Section 9(e)(viii) shall establish procedures to ensure such equipment is properly operated and maintained.

(f) **BART Alternative.**

(i) The Administrator may implement or require participation in an emissions trading program or other alternative measures developed in accordance with 40 CFR 51.308(e) rather than to require sources subject to BART to install, operate and maintain BART.

(g) **Monitoring, Recordkeeping and Reporting.** The owner or operator of any existing stationary facility that is required to install best available retrofit technology or an approved BART alternative shall conduct monitoring, recordkeeping and reporting sufficient to show compliance or noncompliance on a continuous basis.