

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Air Quality Control Commission

REGULATION NUMBER 3

Stationary Source Permitting and Air Pollutant Emission Notice Requirements

5 CCR 1001-5

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

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**PART F REGIONAL HAZE LIMITS - BEST AVAILABLE RETROFIT TECHNOLOGY (BART)
AND REASONABLE PROGRESS (RP)**

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VI. Regional Haze Determinations

VI.A. BART Determinations

VI. A.1. The provisions of this Section VI.A of Regulation Number 3, Part F shall be incorporated into Colorado's Regional Haze State Implementation Plan.

VI.A.2. The sources listed below shall not emit or cause to be emitted nitrogen oxides (NOx), sulfur dioxide (SO2), or particulate in excess of the following limits:

BART Determinations for Colorado Sources			
Unit	NOx Emission Limit	SO2 Emission Limit	Particulate Emission Limit
CENC Unit 4	0.37 lb/MMBtu (30-day rolling average) or 0.26 lb/MMBtu Combined Average for Units 4 and 5 (30-day rolling average)	1.0 lb/MMBtu (30-day rolling average)	0.07 lb/MMBtu

CENC Unit 5	0.19 lb/MMBtu (30-day rolling average) or 0.26 lb/MMBtu Combined Average for Units 4 and 5 (30-day rolling average)	1.0lb/MMBtu (30-day rolling average)	0.07 lb/MMBtu
Craig Unit 1	0.07 lb/MMBtu (30-day rolling average) by 8/31/2021*	0.11 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
Craig Unit 2	0.08 lb/MMBtu (30-day rolling average)	0.11 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu

*Refer to VI.D for additional requirements

Unit	NOx Emission Limit	SO2 Emission Limit	Particulate Emission Limit
Comanche Unit 1	0.20 lb/MMBtu (30-day rolling average) 0.15 lb/MMBtu (combined annual average for units 1 & 2)	0.12 lb/MMBtu (individual unit 30-day rolling average) 0.10 lb/MMBtu (combined annual average for units 1 & 2)	0.03 lb/MMBtu
Comanche Unit 2	0.20 lb/MMBtu (30-day rolling average) 0.15 lb/MMBtu (combined annual average for units 1 & 2)	0.12 lb/MMBtu (individual unit 30-day rolling average) 0.10 lb/MMBtu (combined annual average for units 1 & 2)	0.03 lb/MMBtu
Hayden Unit 1	0.08lb/MMBtu (30-day rolling average)	0.13 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu

Hayden Unit 2	0.07 lb/MMBtu (30-day rolling average)	0.13 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
Martin Drake Unit 5	0.31 lb/MMBtu (30-day rolling average)	0.26 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
Martin Drake Unit 6	0.31lb/MMBtu (30-day rolling average)	0.13lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
Martin Drake Unit 7	0.29 lb/MMBtu (30-day rolling average)	0.13lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
CEMEX – Lyons Kiln	255.3 lbs/hr (30-day rolling average) 901.0 tons/year (12-month rolling average)	25.3 lbs/hr (12-month rolling average) 95.0 tons/yr (12-month rolling average)	0.275 lb/ton of dry feed 20% opacity
CEMEX – Lyons Dryer	13.9 tons/yr	36.7 tons/yr	22.8 tons/yr 10% opacity

VI.A.3. Each source listed in the above tables must comply with the above limits and averaging times as expeditiously as practicable, but in no event later than five years after EPA approval of Colorado's state implementation plan for regional haze, or relevant component thereof. Each source listed in the above tables must maintain control equipment or operational practices required to comply with the above limits and averaging times, and establish procedures to ensure that such equipment or operational practices are properly operated and maintained.

VI.A.4. Except ~~for concerning the~~ Craig Unit 1 ~~NOx emission limit~~, the sources shall submit to the Division a proposed compliance schedule within sixty days after EPA approves the BART portion of the Regional Haze SIP. ~~Craig Unit 1 must comply with the above NOx limit and~~

~~averaging time no later than August 31, 2021.~~ The Division shall publish these proposed schedules and provide for a thirty-day public comment period following publication. The Division shall publish its final determinations regarding the proposed schedules for compliance within sixty days after the close of the public comment period and will respond to all public comments received.

VI.B. Reasonable Progress Determinations

VI.B.1. The provisions of this Section VI.B of Regulation Number 3, Part F shall be incorporated into Colorado's Regional Haze State Implementation Plan.

VI.B.2. The sources listed below shall not emit or cause to be emitted nitrogen oxides (NOx), sulfur dioxide (SO2), or particulate in excess of the following limits:

RP Determinations for Colorado Sources			
Emission Unit	NOx Emission Limit	SO2 Emission Limit	Particulate Emission Limit
Rawhide Unit 101	0.145 lb/MMBtu (30-day rolling average)	0.11 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
CENC Unit 3	246 tons per year (12-month rolling total)	1.2 lb/MMBtu	0.07 lb/MMBtu
Nixon	0.21 lb/MMBtu (30-day rolling average)	0.11 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
Clark Units 1 & 2 Shutdown 12/31/2013	Shutdown 12/31/2013	Shutdown 12/31/2013	Shutdown 12/31/2013
Holcim - Florence Kiln	2.73 lbs/ton clinker (30-day rolling average) 2,086.8 tons/year	1.30 lbs/ton clinker (30-day rolling average) 721.4 tons/year	246.3 tons/year

Nucla	0.5 lb/MMBtu (30-day rolling average)*	0.4 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
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*Refer to VI.E for additional requirements

RP Determinations for Colorado Sources			
Emission Unit	NOx Emission Limit	SO2 Emission Limit	Particulate Emission Limit
Craig Unit 3	0.28 lb/MMBtu (30-day rolling average)	0.15 lb/MMBtu (30-day rolling average)	0.013 lb/MMBtu filterable PM 0.012 lb/MMBtu filterable PM10
Cameo Shutdown 12/31/2011	Shutdown 12/31/2011	Shutdown 12/31/2011	Shutdown 12/31/2011

VI.B.3. Each source listed in the above table must comply with the above limits and averaging times as expeditiously as practicable, but in no event later than December 31, 2017. Each source listed in the above table must maintain control equipment or operational practices required to comply with the above limits and averaging times, and establish procedures to ensure that such equipment or operational practices are properly operated and maintained.

VI.B.4. Except for Nucla, the sources shall submit to the Division a proposed compliance schedule within sixty days after EPA approves the RP portion of the Regional Haze SIP. The Division shall publish these proposed schedules and provide for a thirty-day public comment period following publication. The Division shall publish its final determinations regarding the proposed schedules for compliance within sixty days after the close of the public comment period and will respond to all public comments received.

VI.C. Public Service Company of Colorado (PSCo) BART Alternative Program

VI.C.1. The provisions of this Section VI.C of Regulation Number 3, Part F (with the exception of the SO2 cap of subsection VI.C.4) shall be incorporated into Colorado's Regional Haze State Implementation Plan.

VI.C.2. The sources listed below shall not emit or cause to be emitted nitrogen oxides (NOx), sulfur dioxide (SO2), or particulate in excess of the following limits, after the following compliance dates:

BART Alternative Program Determinations for PSCo Sources			
Emission Unit	NOx Emission Limit	SO2 Emission Limit	Particulate Emission Limit
Cherokee * Unit 1 Shutdown No later than 7/1/2012	0 Shutdown No later than 7/1/2012	0 Shutdown No later than 7/1/2012	0 Shutdown No later than 7/1/2012
Cherokee Unit 2 Shutdown 12/31/2011	0 Shutdown 12/31/2011	0 Shutdown 12/31/2011	0 Shutdown 12/31/2011
Cherokee Unit 3 Shutdown No later than 12/31/2016	0 Shutdown No later than 12/31/2016	0 Shutdown No later than 12/31/2016	0 Shutdown No later than 12/31/2016
Cherokee Unit 4	0.12 lb/MMBTU (30-day rolling average) by 12/31/2017 Natural Gas Operation 12/31/2017	7.81 tpy (rolling 12 month average) Natural Gas Operation 12/31/2017	0.03 lbs/MMBtu Natural Gas Operation 12/31/2017
Valmont Unit 5 Shutdown 12/31/2017	0 Shutdown 12/31/2017	0 Shutdown 12/31/2017	0 Shutdown 12/31/2017

Pawnee	0.07 lb/MMBTU (30-day rolling average) by 12/31/2014	0.12 lbs/MMBtu (30-day rolling average) by 12/31/2014	0.03 lbs/MMBtu
Arapahoe** Unit 3 Shutdown 12/31/2013	0 Shutdown 12/31/2013	0 Shutdown 12/31/2013	0 Shutdown 12/31/2013
Arapahoe Unit 4	600 tpy on (rolling 12 month average) Natural Gas operation 12/31/2014	1.28 tpy (rolling 12 month average) Natural Gas operation 12/31/2014	0.03 lbs/MMBtu Natural Gas operation 12/31/2014

* 500 tpy NOx will be reserved from Cherokee Station for netting or offsets

** 300 tpy NOx will be reserved from Arapahoe Station for netting or offsets for additional natural gas generation

VI.C.3. Each source listed in the above table must either shut down or comply with the above limits and averaging times no later than the compliance date set forth in the above table. Each source listed in the above table must maintain any applicable control equipment required to comply with the above limits and averaging times, and establish procedures to ensure that such equipment is properly operated and maintained.

VI.C.4. In addition to the above listed emission limits and compliance dates, between 1/1/2013 and 12/31/2015, Cherokee Units 3 and 4 and Valmont, considered as a whole, shall not emit in excess of 4,200 tons of SO2 per year as determined on a calendar year annual basis. Between 1/1/2016 and 12/31/2017 Cherokee Unit 4 and Valmont considered as a whole, shall not emit in excess of 3,450 tons of SO2 per year as determined on a calendar year annual basis.

VI.D. Craig Unit 1 Additional Compliance Requirements

VI.D.1. Craig Unit 1 will:

VI.D.1.a. Permanently cease operation on or before December 31, 2025; or

VI.D.1.b. Alternatively, cease burning coal no later than August 31, 2021, with the option to convert the unit to natural-gas firing on or before August 31, 2023.

VI.D.1.b.(i) If Craig Unit 1 is converted to natural-gas firing, the Unit will meet a NOx emission limit of no more than 0.07 lb/MMBtu 30-day rolling average applicable after August 31, 2021.

VI.D.2. The owner-operator of Craig Unit 1 will notify the Division in writing on or before February 28, 2021 whether the unit will cease operation or convert to gas.

VI.D.3. Craig Unit 1 will meet a NOx emission limit of 0.28 lb/MMBtu 30-day rolling average going forward from January 1, 2017 (first compliance date January 31, 2017), until converting to natural gas or permanently shutting down.

VI.D.4. Craig Unit 1 will meet an annual NOx limit of 4,065 tons per year by December 31, 2019 on a calendar year basis beginning in 2020.

VI.E Nucla Additional Compliance Requirements

VI.E.1 Nucla Station will permanently cease operation on or before December 31, 2022.

VI.E.2. Nucla Station will meet an annual NOx limit of 952 tons per year by January 1, 2020 on calendar year basis beginning in 2020.

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PART G STATEMENTS OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE

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I.BBB. Adopted December 15, 2016

Regulation Number 3, Part F – Revising the BART and Reasonable Progress determinations for Craig Station Unit 1 (“Craig Unit 1”) and Nucla (“Nucla”).

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedures Act, C.R.S. § 24-4-103, the Colorado Air Pollution Prevention and Control Act, C.R.S. §§ 25-7-110 and 25-7-110.5, and the Air Quality Control Commission’s (“Commission”) Procedural Rules.

Basis

Regulation Number 3, Part F – Revising the BART and Reasonable Progress determinations for Craig Unit 1 and Nucla, respectively.

Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act, C.R.S. § 25-7-105(1) directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in Section 25-7-102 and are necessary for the proper implementation and administration of Article 7, including a comprehensive state implementation plan which will prevent significant deterioration of air quality. Section 25-7-109 authorizes the Commission to adopt emission control regulations pertaining to air pollutants.

Purpose

The Colorado Air Quality Control Commission ("Commission") makes targeted revisions to portions of Regulation Number 3, Part F, Section VI., containing the Regional Haze Best Available Retrofit Technology ("BART") and Reasonable Progress determinations that the Commission previously adopted as part of Colorado's Regional Haze State Implementation Plan ("SIP").

After the U.S. Environmental Protection Agency ("EPA") approved Colorado's Regional Haze SIP, WildEarth Guardians and the National Parks Conservation Association ("NPCA") challenged portions of the approval by filing suit in the Tenth Circuit (Guardians v. EPA, No. 13-9520 and NPCA v. EPA, No. 13-9525). As part of that lawsuit, the plaintiffs contested the nitrogen oxides ("NO_x") provisions for Craig Unit 1, which is owned, in part, and operated by Tri-State Generation and Transmission Association, Inc. ("Tri-State"). In furtherance of settlement of that litigation, in 2014, the Commission approved revisions to Regulation Number 3, Part F, Section VI to change the Craig Unit 1 NO_x emission limit from 0.28 lb/MMBtu to 0.07 lb/MMBtu, and set the associated compliance deadline for Craig Station Unit 1 as August 31, 2021.

Since the Commission approved the 2014 revisions to Regulation No. 3, Part F and Colorado's Regional Haze SIP, an agreement has been reached involving Craig Unit 1 and Nucla Station ("Nucla"). The agreement includes the following commitments:

- (I) Craig Unit 1 will either close on or before December 31, 2025 *or* cease burning coal no later than August 31, 2021 with the option to convert the unit to natural-gas firing by August 31, 2023;
- (II) In the case of a conversion to natural-gas firing, a 30-day rolling average NO_x emission limit of 0.07 lb/MMBtu will be effective after August 31, 2021;
- (III) For both scenarios, Craig Unit 1 will be subject to a NO_x emission limit of 0.28 lb/MMBtu, on a 30 day rolling average, effective January 1, 2017 (first compliance date January 31, 2017), until converting to natural gas or permanently shutting down;
- (IV) Craig Unit 1 will be subject to an annual NO_x emission limit of 4,065 tons per year effective on December 31, 2019 on a calendar year basis beginning in 2020;
- (V) Nucla will close on or before December 31, 2022; and
- (VI) Nucla will be subject to an annual NO_x emission limit of 952 tons per year effective January 1, 2020 on a calendar year basis beginning in 2020.

The Air Pollution Control Division ("Division") conducted a BART reassessment for Craig Unit 1 and Reasonable Progress review for Nucla, respectively, taking into account the agreement. The agreement reflects a changing industry, economic, and regulatory landscape that does not necessarily favor the installation of costly post-combustion retrofit controls on aging coal-fired electric generating units. The agreement and these revisions will also result in greater emissions reductions than would result from the previously approved SIP. The Commission's adoption of these revisions will result in further reductions of visibility impairing pollutants, in addition to providing other environmental co-benefits.

In accordance with the BART reassessment and Reasonable Progress review, the Commission revises 3, Part F, Section VI to reflect the applicable elements of the agreement described herein.

In addition to the regulatory changes to Regulation Number 3, Part F, the Commission revises corresponding portions of Colorado's Regional Haze SIP: Chapter 6 – Best Available Retrofit Technology; Chapter 8 – Reasonable Progress; Appendix C – Technical Support for the BART Determinations; and Appendix D – Technical Support for the Reasonable Progress Determinations. The revised chapters fully replace previously adopted SIP chapters.

The revisions also correct any typographical, grammatical, and formatting errors.

Findings of Fact

Colorado's Regional Haze SIP revisions are consistent with EPA's federal requirements under the Regional Haze rule. Accordingly, the revisions do not exceed the requirements of the federal act or differ from the federal act or rules. However, to the extent that these revisions could be viewed as exceeding or differing from the federal act, the Commission determines in accordance with C.R.S. § 25-7-110.5(5)(b):

- (I) Colorado's Regional Haze SIP was drafted in accordance with EPA's Regional Haze Rule. The Regional Haze Rule provides states flexibility in how states may consider the federal statutory and regulatory factors when determining BART and reasonable progress goals.
- (II) EPA's regional haze requirements are performance based. The Regional Haze Rule sets forth factors the states must consider when determining BART for sources reasonably anticipated to cause or contribute to the impairment of visibility in federal Class I areas. States have the discretion to select the appropriate controls for such sources.
- (III) EPA's Regional Haze Rule guides how states must determine BART for their BART-eligible sources. However, state discretion is a cornerstone of the Regional Haze Rule (70 FR 39137). Colorado considered Colorado's issues of concern when developing these revisions.
- (IV) The adopted revisions will improve industry's ability to comply with the goals of the Regional Haze Rule in a more cost-effective way, by increasing certainty and preventing or reducing the need for costly retrofits.
- (V) The timing of the adopted revisions has been considered. The timeframe of the adopted revisions allows for the avoidance of costly retrofits.
- (VI) The adopted rule will assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth.
- (VII) The adopted rule establishes reasonable equity for sources because the Regional Haze Rule applies the same standards for determining BART to all BART-eligible sources. BART determinations are source specific and different controls and emission limits are to be expected.
- (VIII) Adoption of a more stringent rule would not reduce costs upon other entities.
- (IX) These revisions do not modify the currently approved procedural, reporting, or monitoring requirements in Colorado's Regional Haze SIP.
- (X) Technology is available to comply with the adopted revisions. The technology to convert to natural gas is a demonstrated and already utilized technology.

(XI) The revisions will lead to further reductions of air pollutant emissions, contribute to the prevention of pollution, and represent a more cost-effective environmental gain.

(XII) Neither an alternative rule nor a no action alternative would address or achieve the emission reductions to be achieved through these revisions. Further, failure to adopt the revisions could result in expensive and time consuming retrofits or litigation.

As part of adopting the revisions to Regulation Number 3, Part F, Section VI., the Commission has taken into consideration each of the factors set forth in C.R.S. § 25-7-109(1)(b).

To the extent that C.R.S. § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

(I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.

(II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of air pollutant emissions.

(III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.

(IV) The rules are the most cost-effective to achieve the necessary reduction in air pollution and provide the regulated community flexibility.

(V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.