

REVISION OF
COLORADO'S STATE IMPLEMENTATION PLAN
FOR CLASS I VISIBILITY PROTECTION
CRAIG STATION UNITS 1 AND 2 REQUIREMENTS

CRAIG STATION
SECTION
SUBMITTED
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COLORADO DEPARTMENT OF
PUBLIC HEALTH AND ENVIRONMENT

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PREPARED BY:

COLORADO AIR POLLUTION CONTROL DIVISION

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III. ENFORCEABLE PORTION OF THE SIP REVISION: CRAIG STATION UNITS 1 AND 2 REQUIREMENTS

The following provisions, which are taken from the Craig Consent Decree, are being adopted as part of this revision to the Long-Term Strategy portion of the Colorado Visibility SIP, shall be met by the Craig Owners, and are intended to be enforceable. The Craig Consent Decree numbering scheme has been retained to avoid confusion between the Craig Consent Decree and the SIP, but only those sections pertinent to visibility, necessary to ensure the enforceability of the requirements related to visibility, and to demonstrate reasonable progress are being adopted in this SIP revision. Also, some changes have been made to the Craig Consent Decree language to conform the Craig Consent Decree requirements to the SIP regulatory framework. All changes are highlighted in bold. The changes that have been made to language in paragraphs 24 and 25 below which refer to the force majeure provisions of the Craig Consent Decree have been inserted to ensure that a demonstration of reasonable progress can be made at this time.

II. DEFINITIONS

1. Unless otherwise expressly provided herein, terms used in this **SIP component** [Defined below. "SIP component" replaces Decree wherever it appears] that are defined in the Clean Air Act, 42 U.S.C. §§ 7401, *et seq.*, or regulations implementing the Clean Air Act, shall have the meaning set forth in the Act or regulations.

2. Whenever the terms set forth below are used in this **SIP component**, the following definitions shall apply:

(a) "Act" shall mean the Clean Air Act, 42 U.S.C. §§ 7401, *et seq.*

(b) "Allowance" shall mean an authorization, under Title IV of the Act, allowing Craig Units 1 and 2 to emit one ton of SO₂ in one year.

(c) "Boiler operating day" shall mean any calendar day in which coal is combusted

in the boiler of a unit for more than 12 hours. If coal is combusted for more than 12 but less than 24 hours during a calendar day, the calculation of that day's SO₂ emissions for the unit shall be based upon the average of coal sampling and hourly CEMS data collected during hours in which coal was combusted in the unit, and shall not include any time in which coal was not combusted.

(d) "Business day" shall mean all work days of the week except Saturday, Sunday and all Colorado and federal holidays.

(e) "Calendar day" shall mean any 24 hour period between 12:00 midnight and the following midnight in Colorado.

(f) "CEMS" shall mean continuous emissions monitoring system, which consists of the total equipment used to sample, analyze, and record on a continuous basis SO₂, NO_x, or any other emissions-related parameters that may be required.

(g) "COMS" shall mean continuous opacity monitoring system, which consists of the total equipment used to sample, analyze, and record opacity on a continuous basis.

(h) "Coal" shall mean all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials, Designation D388-77.

(i) "Colorado" shall mean the State of Colorado and the Colorado Department of Public Health and Environment, Air Pollution Control Division.

(j) "Craig Units 1 and 2" shall mean the fossil-fuel fired steam generating plant located near the town of Craig, Colorado, including the two boilers and related electric generators and all ancillary process and air pollution emission control equipment known as Unit 1 and Unit 2.

Craig Station also includes Unit 3 that is not subject to this **SIP component**.

(k) "Day" shall mean a calendar day. In computing any period of time under this SIP component, except in computing compliance with emission limitations, where the last day would fall on a Saturday, Sunday or federal or Colorado holiday, the period shall run until the close of the next business day.

(l) "Decree" shall mean Consent Decree, and any written modifications of such Consent Decree.

(m) "**Craig Owners**" [replaces "**Defendants**" throughout] shall mean Tri-State Generation and Transmission Association, Inc., Public Service Company of Colorado, Salt River Project Agricultural Improvement and Power District, PacifiCorp and Platte River Power Authority and successor owners of the Craig Station Units 1 and 2.

(n) "EPA" shall mean the United States Environmental Protection Agency.

(o) "Excess opacity reading" shall mean each six-minute period of time during which the opacity of emissions from Unit 1 or Unit 2 at the Craig Station exceeds 20 percent, regardless of cause or any regulatory exception, as determined by the existing or any EPA and Colorado-approved alternative COMS.

(p) "FGD" shall mean flue gas desulfurization system.

(q) "Fossil-fuel" shall mean natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials for the purpose of creating useful heat.

(r) "Malfunction" shall mean any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or of a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(s) "NO_x" shall mean all oxides of nitrogen, except nitrous oxide.

(t) "Opacity" shall mean the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

(u) "Paragraph" shall mean a portion of this **SIP component** identified by an arabic numeral.

(v) **[Not applicable to this SIP component]**

(w) **[Not applicable to this SIP component]**

(x) "Quarter" shall mean a calendar quarter consisting of three full months, beginning on the first day of either January, April, July or October.

(y) "Rolling average basis" shall mean an average over a period of time consisting of the last 30 or 90 boiler operating days, with a new average generated each successive boiler operating day, based on the sum of the averages for the last 30 or 90 boiler operating days.

(z) "Section" shall mean a portion of this **SIP component** identified by a capital roman numeral.

(aa) "Shutdown" shall mean the cessation of operation of Unit 1 or Unit 2 at Craig Station for any purpose or reason.

(ab) **[Not applicable to this SIP component]**

(ac) "Startup" shall mean the setting in operation of Unit 1 or Unit 2 at Craig Station for any purpose or reason.

(ad) "SO₂" shall mean sulfur dioxide.

(ae) "Title V" shall mean Title V of the Clean Air Act, 42 U.S.C. § 7661 through

§ 7661f.

(af) "Unit 1" shall mean the steam generating unit and related electric generating and air pollution emission control equipment that commenced commercial operation at the Craig Station in 1980, including all changes made, and to be made, to such equipment thereafter.

(ag) "Unit 2" shall mean the steam generating unit and related electric generating and air pollution emission control equipment that commenced commercial operation at the Craig Station in 1979, including all changes made, and to be made, to such equipment thereafter.

(ah) "Upset condition" shall mean an unpredictable failure of air pollution control or process equipment which results in the violation of an emission limit in this **SIP component** and which is not due to poor maintenance, improper or careless operations, or is otherwise preventable through exercise of reasonable care.

(ai) "Consent Decree" or "Craig Station Consent Decree" shall mean the **Consent Decree entered in Sierra Club v. Tri-State Generation & Transmission Association, Inc., et al., Civil Action No. 96-N-2368, U.S. District Court for the District of Colorado.**

(aj) "SIP Component" shall mean the language from the Craig Station Consent Decree, as modified herein, and included in this section III of this April 2001 revision of the Long-Term Strategy portion of Colorado's Class I Visibility Protection Program State Implementation Plan.

III. JURISDICTION AND VENUE

3. [Not applicable to this SIP component.]
4. [Not applicable to this SIP component.]

IV. APPLICABILITY

5. [Not applicable to this SIP component.]

6. [Not applicable to this SIP component.]

V. EMISSION CONTROLS AND LIMITATIONS

7. **Craig Owners** shall, at all times including periods of startup, shutdown, and malfunction, maintain and operate Craig Units 1 and 2 in a manner consistent with good air pollution control practices for minimizing emissions.

8. **Craig Owners** shall install the following control equipment, and shall achieve the following emission limitations for Craig Units 1 and 2 in accordance with the deadlines set forth in Sections VII and VIII:

(a) Particulate Matter

(i) **Craig Owners** shall install and operate fabric filter baghouses (“baghouses”) on Craig Units 1 and 2, and make any other capital and operational modifications necessary to meet, by the deadlines in Section VIII, the final particulate matter standards and limitations described below.

(ii) The particulate matter limitations for Craig Units 1 and 2 shall be as follows:

(A) 0.03 pounds of particulate matter per million Btu heat input.

Compliance shall be established by EPA test methods;

(B) opacity not in excess of 20 percent, as averaged over each separate 6-minute period within an hour, beginning each hour on the hour. This limit shall apply at all times when air pollutants are being discharged into the atmosphere, but does not apply when the boiler and all fans that move flue gas in the unit are off. Under this limit, during periods of

building a new fire, cleaning of fire boxes, startup, soot blowing, any process modification or adjustment or occasional cleaning of control equipment, **Craig Owners** shall not cause or allow the emission of air pollutants in excess of 30 percent opacity for a period or periods aggregating more than 6 minutes in any 60 consecutive minutes (SIP limit from 5 C.C.R. 1001-3, Section II.A.1. and 5 C.C.R. § 1001-3, II.A.4, approved by EPA on December 3, 1986);

(1) **Craig Owners** shall not cause or allow the emission of air pollutants in excess of 30 percent opacity during any startup, regardless of cause or reason, for a period or periods aggregating more than 6 minutes in any 60 consecutive minutes. A startup is never an upset condition, however, an upset condition can occur after initiation of a startup in which case only excess emissions caused by such upset condition may be excused.

(2) **Craig Owners** shall not cause or allow the emission of air pollutants in excess of 20 percent opacity during any shutdown, unless excused by an upset condition.

(C) opacity no greater than 20 percent except for one six-minute period per hour of not more than 27 percent opacity, as averaged over each separate 6-minute period within an hour, beginning each hour on the hour. Emissions during startup, shutdown and malfunction are excused under this opacity limit. The SIP exceptions at 5 C.C.R. § 1001-3, II.A.4 (approved by EPA on December 3, 1986), including “cleaning of new fire boxes,” “soot blowing,” and “any process modification or adjustment or occasional cleaning of control equipment,” are not excused. (NSPS limit from 40 C.F.R. § 60.42(a)(2) and 40 C.F.R. § 60.11(c)).

(iii) An opacity reading in excess of the limitations in subparagraph

8(a)(ii)(B) may be excused by an upset condition, and an opacity reading in excess of the limitations in subparagraph 8(a)(ii)(C) may be excused by a malfunction, [deletion] if **Craig Owners demonstrate [deletion]** such reading was the result of an upset condition or malfunction. [Deletion]. If **Craig Owners** seek to excuse any opacity reading in excess of the limitations above, they must notify Colorado as soon as possible by telephone, but no later than two hours after the start of the next business day. In addition, for purposes of this **SIP component**, any claim of excuse must be made in writing in **Craig Owners'** next quarterly report following such condition, and must describe: (1) the date and time telephone notification was given to Colorado, including the person to whom notification was given either directly or through a voice mailbox, (2) the cause of the condition, (3) all actions **Craig Owners** took to correct the condition, and (4) all actions **Craig Owners** will take to prevent the condition from recurring.

(iv) **Craig Owners** shall file quarterly excess emission reports (EERs) that set forth all 6-minute average opacity readings in excess of 20 percent in chronological order. **Craig Owners** shall indicate in their EERs the specific times in which the fans that move flue gas are on and off. At **Craig Owners'** election, periods of "process off" and "process on" may be identified in a separate document included with, or attached to, the EER. Sufficient explanation to support any claim of upset condition or malfunction shall be provided at the time the EER is filed.

(v) **Craig Owners** shall perform particulate matter stack tests at **Craig Units 1 and 2** within 100 calendar days after flue gas is first passed through the baghouses and thereafter as directed by Colorado or EPA, and shall submit all results and a complete description of the tests to **Colorado** in the next quarterly report following **Craig Owners'** receipt of the

results.

(vi) Compliance with the opacity emission limitations in Section V, subparagraph 8(a), shall be determined on a continuous basis using data from the current COMS or an EPA and Colorado-approved COMS at an alternative location, and may be verified on an intermittent basis by EPA Method 9, 40 C.F.R. Part 60, Appendix A.

(vii) Until such time as **Craig Owners** install baghouses, **Craig Owners** shall, at all times, optimally operate the existing electrostatic precipitators and all other ESP-related equipment at Craig Units 1 and 2 consistent with good air pollution control practices for minimizing opacity and particulate matter emissions.

(b) Sulfur Dioxide (SO₂)

(i) **Craig Owners** shall treat one hundred percent (100%) of the flue gas from Craig Units 1 and 2 in the respective FGDs during all operating conditions except for those time periods when an upset condition makes it impossible to treat 100% of the flue gas.

However, upset conditions do not apply to the SO₂ emission limitations in this Section and emissions of SO₂ during any such period shall not be excluded from the determination of **Craig Owners'** compliance with the SO₂ emission limitations.

(ii) **Craig Owners** shall enhance the current FGDs for Craig Units 1 and 2 by designing, evaluating, and installing upgrades which will reliably treat 100% of the flue gas. **Craig Owners** shall be generally guided by those enhancements described as "Option 3" in the *Craig Station FGD System Modifications - Analyses of Potential Alternatives; Project Design Basis and Cost Estimates*, dated August 31, 1999. Craig Units 1 and 2 shall be designed to meet at least a 93.7% removal rate as was calculated in the FGD study. In the event that **Craig**

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Owners intend to deviate from Option 3, prior to implementation **Craig Owners** shall submit their complete design plans and required implementation time to ~~[deletion]~~ Colorado and EPA for review.

(iii) **Craig Owners** shall have the right to evaluate the reliability and efficiency of the enhancements described as Option 3 and may, in **Craig Owners'** sole discretion, replace such upgrades with technology and operations which may better integrate with the current operations of Craig Units 1 and 2, including the existing FGD and other systems, while still designing the upgrades to meet at least the 93.7% removal rate and reliably treat 100% of the flue gas for SO₂ removal. ~~[Deletion]~~.

(iv) **Craig Owners** shall design, construct and operate its FGD upgrades and related equipment to meet the emission limitations, including the percentage reduction requirement, set forth below.

(v) The sulfur dioxide mass emission limitations for Craig Units 1 and 2 shall be as follows:

(1) 0.160 pounds per million Btu heat input on a 30 boiler operating day rolling average basis;

(2) 0.130 pounds per million Btu heat input on a 90 boiler operating day rolling average basis.

(vi) Compliance with the SO₂ mass emission limitations in subparagraphs (b)(v)(1) and (2) herein shall be determined using data from the SO₂ CEMS that **Craig Owners** are required to operate and maintain pursuant to Section VI. The SO₂ CEMS shall be placed in a location to accurately monitor 100% of the flue gas, including any periods of by-pass.

(vii) Sulfur dioxide controls at Craig Units 1 and 2 shall achieve a ninety percent (90%) reduction of SO₂ on a 90 boiler operating day rolling average basis measured from coal to stack as described in subparagraph (viii) below, unless **Craig Owners** show, for any unit, that the SO₂ reduction equipment was designed and constructed to meet such limit but that for reasons beyond **Craig Owners'** control, despite the fact that **Craig Owners** had designed and constructed the SO₂ reduction equipment to meet the 90 percent limit, they could not meet such limit (hereinafter "Showing"). As part of their Showing **Craig Owners** must establish the maximum SO₂ reduction attainable, and such maximum amount (minus 2 percentage points if **Craig Owners** elect a 90 day rolling average or minus 3 percentage points if **Craig Owners** elect a 30 day rolling average) shall constitute **Craig Owners'** final SO₂ reduction limit. If **Craig Owners** make this Showing, in no event shall the final limit be less than eighty five percent (85%) reduction of SO₂ on a 30 boiler operating day rolling average basis, or less than eighty six percent (86%) reduction of SO₂ on a 90 boiler operating day rolling average basis, measured from coal to stack. **Craig Owners** must make such Showing on or before the dates by which the 90 percent limit must be achieved pursuant to paragraph 25(b). In the event **Craig Owners** present a Showing that is disputed in accordance with the Consent Decree, the 90% limit shall be stayed and the issue shall be decided as set forth in the Consent Decree. During the pendency of any such stay, the limit shall be **Craig Owners'** final SO₂ reduction limit derived from their Showing as described above. [Deletion].

(viii) Compliance with the SO₂ percentage reduction requirement shall be determined as follows:

- (1) Based on the coal sampling analysis, a daily potential SO₂

emission rate for coal, expressed in lbs/mmBtu, will be established. Using this daily SO₂ emission rate, for each boiler operating day an arithmetic average of the potential SO₂ emission rates for the last 30 or 90 successive boiler operating days (including the boiler operating day for which the calculation is being performed) shall be calculated to establish the SO₂ rolling average basis that is referred to as E_i in the equation below. Each day's potential SO₂ emission rate for coal, before the calculation above is performed, will be provided in the reports required in paragraph 28(c);

(2) The rolling average basis SO₂ stack emission rate will be calculated using CEMS data collected during all operating hours in a boiler operating day. To establish the SO₂ rolling average basis, all hourly emission rates, as derived from the CEMS data, and expressed in lbs/mmBtu, for the last 30 or 90 successive boiler operating days (including the boiler operating day for which the calculation is being performed), will be used to calculate that day's SO₂ rolling average basis that is referred to as E_o in the equation below. Each day's SO₂ stack emission rate for the hours that the boiler was operating, before the calculation above is performed, will be reported under paragraph 28(c);

(3) The 30 or 90 day rolling average basis percent SO₂ reduction, referred to herein as %R, shall be calculated for each boiler operating day as follows:

$$\%R = 100 (1.0 - E_o/E_i)$$

Coal sampling will follow the most current version of ASTM D2234, *Standard Practice for Collection of a Gross Sample of Coal*. Sample preparation will follow the most current version of ASTM 2013, *Standard Method of Preparing Coal Samples for Analysis*. Sulfur analysis will follow the most recent version of ASTM D4239, *Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion*

Methods.

(ix) Regardless of **Craig Owners'** compliance with (and without relieving **Craig Owners** of the obligation to comply with) the emission limitations and other requirements set forth in this Section, in no event shall **Craig Owners** operate any boiler for more than 72 consecutive hours at a unit without an SO₂ control system achieving some reduction of SO₂ emissions at that unit. Following shutdown pursuant to this subparagraph, **Craig Owners** shall only restart the boiler on a unit when the SO₂ control equipment is operating normally.

(c) Nitrogen Oxides

(i) **Craig Owners** shall select, install and operate state-of-the-art low-NO_x burners utilizing two stage combustion with supplemental overfire air on Craig Units 1 and 2. **Craig Owners** shall design and construct such control equipment to meet the emission limitations set forth below.

(ii) Craig Units 1 and 2 shall meet a NO_x limit of 0.30 pounds per million Btu heat input on a calendar year annual average basis. Upset conditions do not apply to this limit and emissions of NO_x during any such period shall not be excluded from the determination of **Craig Owners'** compliance with the NO_x emission limit. Compliance shall be determined on a unit-specific basis using data from NO_x CEMS that **Craig Owners** are required to maintain, calibrate and operate.

9. **Craig Owners** have the burden of proof to demonstrate the application of any exception to any applicable emission limit, and must provide sufficient demonstration of the application of any exception in their contemporaneous excess emission reports (EERs).

VI. CONTINUOUS EMISSION MONITORS

10. At all times ~~[deletion]~~ **Craig Owners** shall maintain, calibrate and operate COMS to measure accurately the opacity of emissions at Craig Units 1 and 2 in full compliance with the requirements found at 40 C.F.R. Part 60, Appendix B, Specification 1, and 5 C.C.R. 1001-3, IV.A and B.

11. **Craig Owners** are currently monitoring opacity with COMS located at the 300 foot level in the stacks of Craig Units 1 and 2. **Craig Owners** intend to change the current location of the COMS to a location after the baghouses and before the FGDs. **Craig Owners** shall seek approval from EPA and Colorado for any such alternative COMS location, and approval from EPA and Colorado to install and thereafter operate a continuous monitoring system to measure pressure differential across the mist eliminator that indicates whether FGD generated particulate matter emissions are minimized. Any request for approval described above shall be submitted to EPA and Colorado no later than 60 days after completion of the FGD design activities set forth at paragraphs 24(a)(iii) and 24(b)(iii). ~~[Deletion]~~. Until EPA and Colorado grant final approval for an alternative location, the current COMS will be used for compliance purposes with all opacity standards, and at no time shall Craig Units 1 and 2 be operated without an approved method of continuous opacity monitoring.

In addition to any other requirements that may apply to an alternative location of opacity monitoring, **Craig Owners** shall ensure after installation of the baghouse and FGD upgrades that the new system is reading comparable opacity to what is read by the current COMS under dry stack conditions. Flue gas may be by-passed around the FGD as necessary during the test in order to achieve dry stack conditions. Comparability will be determined based on simultaneous readings from the COMS at the current and new locations during the COMS recertification

process required at paragraphs 16 and 17. This comparability analysis may take into account the allowable variation associated with the measurements of opacity by each COM after each COM is calibrated to minimize any such variation. **[Deletion]**.

In any request for approval of an alternative COMS location and FGD monitoring system, **Craig Owners** shall provide the manufacturer's specified normal operating pressure drop range across the mist eliminator at given operating gas flow rates and supporting documentation that demonstrates that such range will most effectively minimize particulate matter emissions from the FGD. The pressure drop range submitted by **Craig Owners** shall be shown to be consistent with the normal range established for other similar mist eliminator systems. Within 180 days after flue gas first passes through the upgraded FGDs, **Craig Owners** may submit to EPA and Colorado for approval **[deletion]** a revised pressure drop range based on actual testing data from the applicable unit that will more effectively minimize particulate matter emissions compared to the manufacturer's specified range.

Craig Owners shall continuously and accurately monitor and report to Colorado, pursuant to Section IX, the hourly average pressure drop across the mist eliminator and the hourly average flow rate for each unit at Craig Units 1 and 2. **Craig Owners'** pressure monitoring system shall be of sufficient sensitivity and reliability to enable consistent, continuous and effective monitoring of the pressure drop range. **Craig Owners** shall take all necessary corrective actions to maintain the pressure drop within the applicable range. **[Deletion]**.

12. **Craig Owners** shall provide to Colorado on a quarterly basis all excess emission reports (EERs) for Craig Units 1 and 2 that describe in the form required by this SIP component all excess readings, all claimed exceptions, and all other information required by law.

13. At all times [deletion] **Craig Owners** shall maintain, calibrate and operate CEMS at Craig Units 1 and 2 to measure accurately SO₂ and NO_x emissions from each unit, as well as flow and CO₂, in full compliance with the requirements found at 40 C.F.R. Parts 60 and 75. Nothing herein shall preclude **Craig Owners** from installing, certifying and operating integrated CEMS equipment to measure SO₂, NO_x, CO₂ or opacity, or any combination thereof.

14. **Craig Owners** shall maintain, calibrate and operate a method of coal sampling and analysis to determine accurately, pursuant to methods identified in paragraph 8(b)(viii), the potential emissions from sulfur in the coal entering the boiler reported in pounds of SO₂ per million Btu heat input.

15. **Craig Owners** shall ensure that any modifications to any COMS or CEMS necessitated by **Craig Owners'** actions under or in furtherance of this **SIP component** shall be completed prior to the completion of construction of the SO₂, NO_x, and particulate control systems for Unit 1 and Unit 2, respectively.

16. **Craig Owners** shall recertify all COMS and CEMS on Craig Units 1 and 2 by the following dates:

Opacity COMS: Within 60 boiler operating days after passing flue-gas through the baghouses for each unit, and within 60 boiler operating days after passing flue gas through the upgraded scrubber and NO_x control systems for each unit.

SO₂ CEMS: Within 60 boiler operating days after passing flue gas through the upgraded scrubber system for each unit.

NO_x CEMS: Within 60 boiler operating days after the NO_x burner and overfire air upgrades become operational on each unit.

17. In recertifying such COMS and CEMS, **Craig Owners** shall meet all requirements in 40 C.F.R. Parts 60 and 75 for initial certification. In particular, **Craig Owners** shall demonstrate that the SO₂ and NO_x CEMS are accurately monitoring 100 percent of the flue gas, including any periods of by-pass, and are accurately reflecting SO₂ and NO_x concentrations exiting the stack, that the COMS are accurately monitoring the opacity of emissions, and that **Craig Owners** have resolved any problems with laminar or cyclonic flow, uncombined water droplets, or any other problem that may be affecting the performance of the CEMS or COMS. On at least a quarterly basis during the first year after recertification of the SO₂ CEMS, **Craig Owners** shall contract with a private laboratory to analyze a split sample from a composite coal sample to ensure that **Craig Owners'** coal analysis system is accurately reporting Btu, sulfur and potential SO₂ emissions. **Craig Owners** shall report the results of such analyses in their quarterly reports. **Craig Owners** shall provide at least 30 days prior written notice to **Colorado and EPA** of the date(s) **Craig Owners** intend to perform the recertification tests required by this paragraph and shall allow **Colorado and EPA** to be present for such tests.

18. Beginning within 30 and 90 boiler operating days (depending on the applicable SO₂ limit in Section V) from the date flue gas is first passed through the upgraded SO₂ control equipment for each unit, **Craig Owners** shall calculate the following:

(a) For each boiler operating day, the percentage of SO₂ removal consistent with paragraph 8(b)(viii), and

(b) For each boiler operating day, the SO₂ mass emission rate for 30 and 90 boiler operating days calculated consistent with paragraph 8(b)(viii)(2).

19. **Craig Owners** shall report to **Colorado** on a quarterly basis each 30 day rolling

average and each 90 day rolling average during the prior quarter that exceeded or failed to comply with the SO₂ emission limitations contained in this **SIP component**. Each quarterly report shall include a list of the hours excluded for any reason from the determination of **Craig Owners'** compliance with the SO₂ limits, and a list of times in which flue gas is by-passed around the FGD.

20. Beginning within 30 boiler operating days of the date of the first startup of a unit following installation of the upgrades to the NO_x reduction systems for each unit, **Craig Owners** shall calculate hourly average NO_x concentrations in pounds per million Btu, in accordance with the requirements of 40 C.F.R. Part 75. **Craig Owners** shall use the hourly averages to calculate calendar year averages in accordance with the requirements of 40 C.F.R. Part 75.

21. **Craig Owners** shall report to **Colorado** on a quarterly basis **Craig Owners'** year-to-date average NO_x emission rate for that calendar year.

22. For any hour that valid, quality-assured continuous emission monitor data for a unit is unavailable, SO₂, NO_x and CO₂ emissions shall be calculated in accordance with the missing data substitution procedures contained in 40 C.F.R. Part 75. For any day in which daily coal sample data are not available, the average potential SO₂ emission rate of coal from the previous 30 days as calculated in paragraph 8(b)(viii) shall be substituted.

23. **Craig Owners** shall be bound by the data from their COMS, SO₂ CEMs and coal sampling data, and NO_x CEMS. **Craig Owners** may not challenge the accuracy or credibility of their COMS, SO₂ CEMs and coal sampling data, and NO_x CEMS in any enforcement action unless otherwise expressly allowed by statute or regulation.

VII. CONSTRUCTION SCHEDULE

24. Craig Owners shall design, contract, construct and complete all particulate matter, SO₂, and NO_x control systems required by this SIP component according to the following schedule, subject to a force majeure determination pursuant to the Craig Station Consent Decree, including a decision by the Court to limit force majeure pursuant to paragraph 50 of the Craig Station Consent Decree. However, if any schedule has been extended or will be extended pursuant to such a force majeure determination or determinations by more than 12 months beyond the particular deadline, the Division shall request the Commission reopen (with public notice and hearing) the Long-Term Strategy element of Colorado's Class I Visibility Protection Program State Implementation Plan to reevaluate the demonstration of reasonable progress, and to revise the State Implementation Plan as may be necessary to ensure that the emission limitations are met. In no event shall these force majeure provisions be construed to authorize or create any preemption or waiver of any State or federal air quality law, or of any requirement contained in the Consent Decree and incorporated into this SIP.

(a) UNIT 1

	<u>Activity</u>	<u>Deadline</u>
(i)	Initiate design activities for baghouses, FGD and NO _x upgrades	1/01/01
(ii)	Issuance of binding contract to construct, or contracts to design and construct:	
	For baghouses	7/31/01
	For FGD upgrades	3/31/02
	For NO _x upgrades	1/31/03
(iii)	Substantial completion of design activities	1/01/03

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required for commencement of construction of baghouses, FGD and NO_x control equipment

- (iv) Commencement of physical, on-site construction of baghouse, FGD and NO_x upgrades. Dates from contracts described at (ii) above to be provided by **Craig Owners** to **Colorado** within 15 days of execution of each contract, and shall become enforceable deadlines under this **SIP Component**.
- (v) Completion of construction and initiation of startup of all upgrades 12/31/03
- (vi) Provide an opportunity for on-site inspection by **Colorado and EPA** of control equipment installation 12/31/03 – 6/30/04

(b) **UNIT 2**

<u>Activity</u>	<u>Deadline</u>
(i) Initiate design activities for baghouses, FGD and NO _x upgrades	1/01/01
(ii) Issuance of binding contract to construct, or contracts to design and construct:	
For baghouses	7/31/01
For FGD upgrades	3/31/02
For NO _x upgrades	1/31/03
(iii) Substantial completion of design activities required for commencement of construction of baghouses, FGD and NO _x control equipment	1/01/03
(iv) Commencement of physical, on-site construction of baghouse, FGD and NO _x upgrades. Dates from contracts described at (ii) above to be provided by Craig Owners to Colorado within 15 days of execution of each contract, and shall become enforceable deadlines under this SIP component .	
(v) Completion of construction and initiation of startup of all upgrades	6/30/04

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- (vi) Provide an opportunity for on-site inspection by Colorado and EPA of control equipment installation

6/30/04 – 12/31/04

VIII. EMISSION LIMITATION COMPLIANCE DEADLINES

25. **Craig Owners'** obligation to meet the particulate matter, SO₂, and NO_x emission limitations set forth in Section V shall commence on the dates listed below, subject to a force majeure determination pursuant to the Craig Station Consent Decree, including a decision by the Court to limit force majeure pursuant to paragraph 50 of the Craig Station Consent Decree. However, if any schedule has been extended or will be extended pursuant to such a force majeure determination or determinations by more than 12 months beyond the particular deadline, the Division shall request the Commission reopen (with public notice and hearing) the Long-Term Strategy element of Colorado's Class I Visibility Protection Program State Implementation Plan to reevaluate the demonstration of reasonable progress, and to revise the State Implementation Plan as may be necessary to ensure that the emission limitations are met. In no event shall these force majeure provisions be construed to authorize or create any preemption or waiver of any State or federal air quality law, or of any requirement contained in the Consent Decree and incorporated into this SIP.

(a) Particulate Matter:

(i) For Unit 1, within 180 days after completion of construction of baghouse system, or by April 30, 2004, whichever date is earlier.

(ii) For Unit 2, within 180 days after completion of construction of

baghouse system, or by October 31, 2004, whichever date is earlier.

(b) SO₂.

(i) For Unit 1, within 180 days after completion of construction of the additional SO₂ control equipment, or by June 30, 2004, whichever date is earlier, **Craig Owners** shall achieve the SO₂ mass emission limits at paragraph 8(b)(v), and shall achieve an 85 percent reduction of SO₂ emissions on a 30 boiler operating day rolling average basis measured from coal to stack. Within 270 days of the initial compliance date above, but no later than March 31, 2005, **Craig Owners** shall achieve the 90 percent SO₂ reduction limit, subject to the provisions of subparagraph 8(b)(vii); and

(ii) For Unit 2, within 180 days after completion of construction of the additional SO₂ control equipment, or by December 31, 2004, whichever date is earlier, **Craig Owners** shall achieve the SO₂ mass emission limits at paragraph 8(b)(v), and shall achieve an 85 percent reduction of SO₂ emissions on a 30 boiler operating day rolling average basis measured from coal to stack. Within 270 days of the initial compliance date above, but no later than September 30, 2005, **Craig Owners** shall achieve the 90 percent SO₂ reduction limit, subject to the provisions of subparagraph 8(b)(vii).

(c) NO_x: Design, construction, installation, and testing of overfire upgrades must be completed by June 30, 2004 for Unit 1 and December 31, 2004 for Unit 2.

IX. REPORTING

26. Within thirty days after the end of each quarter, beginning with the report for the first quarter of 2001 [~~deletion~~], **Craig Owners** shall provide a quarterly report to **Colorado** regarding the immediately preceding quarter that contains all of the information this SIP

component requires **Craig Owners** to report on a quarterly basis.

27. [Not applicable to this SIP component.]

28. In specific, each quarterly report shall include:

(a) A description of construction deadlines achieved, progress made toward meeting future deadlines, and any actual, expected or reasonably likely delays;

(b) All elements of the opacity, SO₂ and NO_x quarterly excess emission and monitoring report [**deletion**];

(c) After installation of the SO₂ control equipment upgrades, the required quarterly reports for SO₂ emissions (including emissions during all excluded periods as well as SO₂ content calculated from coal for each day, the SO₂ stack emissions for each day, and each day's SO₂ percent removal rate), coal sulfur analyses, pressure drop and flow data relating to the mist eliminators, and quarterly reports required under 40 C.F.R. Part 60 containing CEMS quality assurance information;

(d) After installation of the NO_x control equipment upgrades, the required year-to-date quarterly reports for NO_x emissions; and,

(e) [Not applicable to this SIP component.]

29. [Not applicable to this SIP component.]

30. **Craig Owners'** requirement to provide quarterly reports is in addition to any other notification or report required by this **SIP component**, unless such notification or report is required on a quarterly basis. Furthermore, nothing in this **SIP component** shall be interpreted to either excuse or diminish **Craig Owners'** obligation to provide any other reports, notices or other documents to the public, or local, state or federal officials.

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