Colorado Department of Public Health and Environment

OPERATING PERMIT

Public Service Co - Pawnee Station

First Issued: January 1, 2003
Renewed: January 1, 2010
Last Revised: November 15, 2011

AIR POLLUTION CONTROL DIVISION
COLORADO OPERATING PERMIT

FACILITY NAME: Pawnee Station

OPERATING PERMIT NUMBER

96OPMR129

FACILITY ID: 0870011

RENEWED: January 1, 2010
EXPIRATION DATE: January 1, 2015
MODIFICATIONS: See Appendix F of Permit

Issued in accordance with the provisions of Colorado Air Pollution Prevention and Control Act, 25-7-101 et seq. and applicable rules and regulations.

ISSUED TO:

Public Service Company of Colorado
1800 Larimer Street, Suite 1300
Denver, CO 80202

PLANT SITE LOCATION:

14940 County Road 24
Brush, CO 80723
Morgan County

INFORMATION RELIED UPON
Operating Permit Renewal Application Received: November 20, 2006
And Additional Information Received: December 19, 2008 and May 7, 14 and 28, 2009

Nature of Business: Coal-Fired Electric Generating Station
Primary SIC: 4911

RESPONSIBLE OFFICIAL
Name: George Hess
Title: General Manager – Power Generation, Colorado
Phone: (303) 571-7282

FACILITY CONTACT PERSON
Name: Quinn Kilty
Title: Manager, Air and Water Quality
Phone: (303) 294-2165

SUBMITTAL DEADLINES
Semi-Annual Monitoring Period: January 1 – June 30, July 1 – December 31
Semi-Annual Monitoring Report: Due on August 1, 2010 & Feb. 1, 2011 & subsequent years
Annual Compliance Period: January 1 to December 31
Annual Compliance Certification: Due on February 1, 2011 & subsequent years

Note that the Semi-Annual Monitoring Reports and Annual Compliance Certifications must be received at the Division office by 5:00 p.m. on the due date. Postmarked dates will not be accepted for the purposes of determining the timely receipt of those reports/certifications.

FOR ACID RAIN SUBMITTAL DEADLINES SEE SECTION III.4 OF THIS PERMIT

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SECTION I - General Activities and Summary

1. Permitted Activities

1.1 This facility consists of one (1) coal-fired boiler (Unit 1) used to produce electricity. This boiler and turbine generator is rated at 547 gross MW and is equipped with a baghouse to control particulate matter emissions and low NO_X burners with over-fire air to control NO_X emissions. In addition, there is a natural gas-fired auxiliary boiler (Unit 2) at the facility, which is primarily used to provide heat to the facility when Unit 1 is not running. Other significant emission sources at this facility consist of fugitive particulate matter emissions from coal handling and storage, ash handling and disposal and vehicle traffic on paved and unpaved roads. In addition, there are also sources of particulate matter emissions from point sources, including coal handling (crushers, transfer towers and conveying), ash handling (ash silo), and the soda ash handling system (for water treatment system). The facility also has one cooling tower that emits particulate matter emissions in "drift" and evaporates chloroform and an emergency fire pump engine.

In December 2008, the source submitted an application to incorporate the mercury limits from Colorado Regulation No. 6, Part B, Section VIII into their permit. In order to meet the mercury limits, the source proposed to use an activated carbon (sorbent) injection system as a primary control option for mercury with a chemical injection system to be considered as a secondary control option (either in conjunction with the sorbent injection system or as a stand-alone mercury control system). One sorbent storage silo was installed to support the sorbent injection system. The appropriate applicable requirements for the storage silo have been incorporated into the permit.

Public Service Company's (PSCo's) Pawnee Station is co-located with the Manchief Generating Station. Since the two facilities are located on contiguous and adjacent property, belong to the same industrial grouping (first two digits of the SIC code are the same) and are under common control (via a power purchase agreement with PSCo), they are considered a single stationary source for purposes of major stationary source new source review and Title V operating permit applicability. A separate Title V operating permit was issued for the Manchief Generating Station (01OPMR236). In addition, Boral Material Technologies, Inc. (BMTI) conducts ash conditioning, handling and blending operations at Pawnee station. BMTI is considered a support facility for PSCo's Pawnee Station and as such is considered a single source with PSCo's Pawnee Station and subsequently BMTI is also considered a single source with Manchief Generating Station. A separate Title V permit was issued for BMTI Pawnee Station (03OPMR244).

This facility is located at 14940 County Road 24, near Brush in Morgan County. The area in which the plant operates is designated as attainment for all criteria pollutants.

There are no affected states within 50 miles of the plant. There are no Federal Class I designated areas within 100 kilometers of the plant.

1.2 Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air pollutants from this facility in accordance with the requirements, limitations, and conditions of this permit.

1.3 The Operating Permit incorporates the applicable requirements contained in the underlying construction permits, and does not affect those applicable requirements, except as modified during review of the application or as modified subsequent to permit issuance using the modification procedures found in Regulation No. 3, Part C. These Part C procedures meet all applicable substantive New Source Review requirements of Part B. Any revisions made using the provisions of Regulation No. 3, Part C shall become new applicable requirements for purposes of this Operating Permit and shall survive reissuance. Any requirements that were designated in the Compliance Order on Consent (issued February 27, 1996) as applicable requirements have been incorporated into this operating permit and shall survive reissuance as applicable requirements. This permit incorporates the applicable requirements (except as noted in Section II) from the following construction permits: EPA PSD Permit, 11MR674 and C-12,093-1 and –4.

1.4 All conditions in this permit are enforceable by US Environmental Protection Agency, Colorado Air Pollution Control Division (hereinafter Division) and its agents, and citizens unless otherwise specified. **State-only enforceable conditions are:** Permit Condition Number(s): Section II - Conditions 1.16 (Mercury) and 14 (Regional Haze Requirements) and Section V - Conditions 3.d, 3.g. (last paragraph), 14 and 18 (as noted).

1.5 All information gathered pursuant to the requirements of this permit is subject to the Recordkeeping and Reporting requirements listed under Condition 22 of the General Conditions in Section V of this permit. Either electronic or hard copy records are acceptable.

2. Alternative Operating Scenarios

2.1 The permittee shall be allowed to make the following changes to its method of operation without applying for a revision of this permit.

2.1.1 The facility may use natural gas, No. 2 fuel oil or combination for startup, shutdown and flame stabilization as specified under Section II.

2.1.2 Evaporation of chemical cleaning solutions may be performed in Boiler No. 1 under the following conditions:

2.1.2.1 All air pollution control equipment shall be in operation during evaporation of cleaning solutions.

2.1.2.2 The permittee shall retain records, on site, of each cleaning event. These records shall include the date and time the event begins and ends and the amount and types of solutions used in the cleaning event.

2.2 The facility must, contemporaneously with making a change from one operating scenario to another, maintain records at the facility of the scenario under which it is operating (Colorado Regulation No. 3, Part A, Section IV.A.1). Either electronic or hard copy records are acceptable.

3. Prevention Of Significant Deterioration (PSD)

3.1 This facility is a major stationary source (potential to emit of any criteria pollutant $\geq$ 100 tpy) for the purposes of PSD review requirements (Colorado Regulation 3, Part D, Section VI). An EPA PSD Permit was issued on December 6, 1976. Future modifications to this facility resulting in a significant net emissions increase (see Reg 3, Part D, Section II.A.26 and 42) for any pollutant as listed in Regulation No. 3, Part D, Section II.A.42, or are major by themselves will result in the application of the PSD review requirements.

3.2 Operating Permits 02OPMR244 (BMTI – Pawnee) and 01OPMR236 (Manchief Generating Station) are to be considered in conjunction with this operating permit for purposes of determining the applicability or non-applicability of PSD regulations.

4. Accidental Release Prevention Program (112(r))

4.1 Based upon the information provided by the applicant, this facility is subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act).

5. Compliance Assurance Monitoring (CAM)

5.1 The following emission points at this facility use a control device to achieve compliance with an emission limitation or standard to which they are subject and have pre-control emissions that exceed or are equivalent to the major source threshold. They are therefore subject to the provisions of the CAM program as set forth in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV:

Units B001 – Unit 1 Boiler

See Section II, Condition 1.15 for compliance assurance monitoring requirements.

6. Summary of Emission Units

6.1 The emissions units regulated by this permit are the following:

Emission Unit No./ Facility ID	AIRS Stack Number	Description	Startup Date	Pollution Control Device
B001	001	Boiler No. 1 (Unit 1), Foster Wheeler, Opposed Fired, Natural Circulation Boiler, Serial No. 2-79-2381, Rated at 5,346 MMBtu/hr. Coal Fired, with Natural Gas Used for Startup, Shutdown and Flame Stabilization.	November 1981 Baghouse and Low NO_X Burners with Over-Fire Air - December 1994 Sorbent Injection/ Chemical Injection - December 2011	Baghouse (PM), Low NO_X Burners with Over-Fire Air (NO_X) and Sorbent Injection and/or Chemical Injection (Hg)
B002	002	Boiler No. 2 (Auxiliary Boiler), Babcock and Wilcox, Package Boiler, Model and Serial No. FM-2763, 98 MMBtu/hr. Natural Gas Fired.	November 1981	Uncontrolled
F001	003	Fugitive Particulate Emissions from Coal Handling and Storage (Rail Car Unloading, Storage Pile and Coal Dozing)	November 1981	Water/Surfactant Sprays at Railcar Unloading
F002	006	Fugitive Particulate Emissions from Ash Handling and Disposal	November 1981	Uncontrolled
F003	011	Fugitive Particulate Emissions from Paved and Unpaved Roads	November 1981	Water Spray on Unpaved Roads
P001	004 & 005	Coal Handling System (Crushers, Transfer Tower and Conveying)	November 1981	Crushers are vented to the Crusher Baghouse. Transfer points at the Plant Transfer Tower/Tripper Deck are vented to a Baghouse. Water/Surfactant Spray Systems are located at the Crushers and Live Storage Rotary Plow Conveyors and Crusher are Enclosed.
P002	006	Ash Silo	November 1981	During Silo Loading Emissions are Vented to the Boiler Baghouse
P003	013	Soda Ash Handling System	November 1981	Bin Vent Filters
M001	012	Cooling Water Tower, rated at 190,000 GPM	November 1981	Drift Eliminators
P004	021	One (1) Sorbent Storage Silo	December 2011	Bin Vent Filters
M002	N/A	One (1) Detroit Allison, Model No. 70847010, Serial No. 8VA387829, diesel-fired engine driving an emergency fire pump. This engine is rated at 230 hp and 20 gal/hr.	1980	Uncontrolled

SECTION II - Specific Permit Terms

1. B001 - Boiler No. 1 (Unit 1) Rated at 5,346 MMBtu/hr, Coal Fired

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
Particulate Matter (PM)	1.1.	0.1 lbs/MMBtu		N/A	Baghouse Maintenance and Source Testing	See Condition 1.1.
Particulate Matter (PM and PM_{10}) - Emission Calculations	1.2.	N/A	N/A	1.26×10^{-4} lb/MMBtu	Calculation and Recordkeeping	Annually
SO_2	1.3.	1.2 lbs/MMBtu		N/A	Continuous Emission Monitor	Continuous, 3-Hour Rolling Average
NO_X	1.4.	0.7 lbs/MMBtu		N/A	Continuous Emission Monitor	Continuous, 3-Hour Rolling Average
Emission Calculations	1.5.	N/A	N/A	in lbs/ton SO_2 CEM NO_X CEM CO 0.50 VOC 0.06	Recordkeeping and Calculation	Annually
Coal Usage	1.6.	N/A	Coal: 2.9×10^6 tons/yr	N/A	Recordkeeping	Monthly
Coal Sampling	1.7.	N/A	N/A	N/A	ASTM Methods	See Condition 1.7.
Continuous Emission Monitoring Requirements	1.8.	N/A	N/A	N/A	See Condition 1.8.	
NSPS Subpart A General Provisions	1.9.	N/A	N/A	N/A	As Required by NSPS General Provisions	Subject to NSPS General Provisions
Lead (Pb)	1.10.	N/A	N/A	See Condition 1.10	Recordkeeping and Calculation	Annually
Opacity	1.11.	Not to Exceed 20%, Except as Provided for in 1.12 Below		N/A	Continuous Opacity Monitor	Continuous, Six Minute Intervals

Parameter	Permit Condition Number	Limitations Short Term Long Term	Compliance Emission Factor	Monitoring Method	Interval
Opacity	1.12.	For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes	N/A	Continuous Opacity Monitor	Continuous, Six Minute Intervals
NSPS Opacity	1.13.	Not to Exceed 20% Except for one Six (6) Minute Average Not to Exceed 27% Per Hour	N/A	Continuous Opacity Monitor	Continuous, Six Minute Intervals
Acid Rain Requirements	1.14.	See Section III of this Permit		Certification	Annually
Compliance Assurance Monitoring Requirements	1.15.	See Condition 1.15		See Condition 1.15	
Mercury (Hg) **State-Only**	1.16	Beginning January 1, 2012: 0.0174 lb/GWh on a 12-month rolling average	N/A	Hg Monitoring System	Continuous

1.1 Particulate Matter (PM) emissions shall not exceed the limitation stated above (Colorado Regulation No. 1, Section III.A.1.c). Compliance with this standard shall be demonstrated by the following:

1.1.1 Maintaining and Operating the baghouses in accordance with the requirements identified in Condition 8.1.

1.1.2 Conducting performance tests in accordance with Condition 8.2.

During each of the performance tests conducted as required by this condition, a baseline opacity limit shall be established for the compliance assurance monitoring (CAM) requirements specified in Conditions 1.15. The value of the baseline opacity level is determined by averaging all of the 6-minute average opacity values (reported to the nearest 0.1 percent opacity) from the COMS measurement recorded during each of the test run intervals conducted for the performance test, and then adding the appropriate percent opacity (see table below) to the calculated average value for all of the test runs.

Results of PM performance test	Opacity to add-on
Less than or equal to 50% of the PM standard	5.0 %
Greater than 50% but less than or equal to 75 % of the PM standard	3.5 %
Greater than 75% of the PM standard	2.5 %

If the calculated opacity value (COMS average plus add-on) is less than 5.0 percent, then the opacity baseline level is set at 5.0 percent.

An initial performance test was conducted in April 2010 and the baseline opacity level has been set at the levels specified in Condition 1.15.1.2.

The permittee shall submit the proposed baseline opacity determined from any subsequent performance test for Division approval and begin monitoring under the new baseline within 45 calendar days of the test. The proposed baseline opacity submittal shall include the justification and supporting data for the proposed baseline opacity and any add-on values (e.g., 2.5% or 5.0% as indicated above). In addition, the permittee shall submit with the proposed baseline opacity a minor modification application to revise the permit to incorporate the proposed baseline opacity as the indicator range for the 24-hr average opacity.

1.1.3 Following the compliance assurance monitoring requirements specified in Condition 1.15.

1.1.4 Upon the compliance deadline for the PM emission limitations in Condition 14.2 (Regional Haze PM limit), compliance with the PM limitation in Condition 1.1 shall, in the absence of credible evidence to the contrary, be presumed as long as the monitoring conducted in accordance with the requirements in Conditions 14.2.1 through 14.2.3 (Regional Haze PM monitoring) indicates compliance with the PM emission limitation in Condition 14.2 (Regional Haze PM limit).

1.2 Annual emissions of PM and PM_{10} for the purposes of APEN reporting and payment of annual fees will be determined using the emission factor for PM determined from the most recent source testing required in Condition 1.1 and the annual heat input in the following equation:

PM: $$\text{Tons/yr} = \frac{[\text{EF (lbs/MMBtu) x annual heat input (MMBtu/yr)}]}{\text{2000 lbs/ton}}$$

PM_{10}: Tons/yr = 0.92 x (Annual Emissions of PM)

The annual heat input, from coal, shall be determined using the annual coal consumption and the average heat content of the coal, as determined by the required coal sampling in Condition 1.7.

1.3 Sulfur Dioxide (SO_2) emissions shall not exceed 1.2 lbs/MMBtu on a 3 hour rolling average (Colorado Regulation No. 1, Section VI.A.3.a.(ii) and VI.A.1). Compliance with this standard

shall be monitored using the continuous emission monitor (CEM) required by Condition 1.8 of this permit.

1.4 Nitrogen Oxide (NO_X) emissions shall not exceed 0.7 lbs/MMBtu, on a 3-hour rolling average (40 CFR 60.44(a)(3) and 60.45(g)(3), as adopted by reference in Colorado Regulation No. 6, Part A). Compliance with this standard shall be monitored using the continuous emission monitor (CEM) required by Condition 1.8 of this permit.

Note that the NO_X emission limits are not applicable during times of startup, shutdown and malfunction. However, those instances during startup, shutdown and malfunction when the NO_X limitation is exceeded shall be identified in the Excess Emission Report required in Condition 9.5.

1.5 The emission factors listed above have been approved by the Division and shall be used to calculate emissions from the boiler (EPA's Compilation of Emission Factors (AP-42), dated September 1998, Section 1.1). Annual emissions for the purposes of APEN reporting and the payment of annual fees shall be calculated using the above emission factors and the annual coal usage, as required by Condition 1.6, in the following equation:

$$\text{Tons/yr} = \frac{[\text{EF (lbs/ton) x annual coal usage (tons/yr)}]}{2000 \text{ lbs/ton}}$$

Annual emissions of SO_2 and NO_X shall be determined from the Continuous Emission Monitors (CEMs) required by Condition 1.8.

1.6 Coal Usage shall not exceed the above limitations (Colorado Construction Permit 11MR675, as modified under the provisions of Section I, Condition 1.3). Coal consumed by the boiler shall be monitored and recorded monthly using belt scales and corporate records as necessary. Monthly coal consumption shall be summed and used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

1.7 Coal shall be sampled in accordance with the requirements identified in Condition 12. Vendor sample results from all coal shipments shall be used to determine the average heat, sulfur, ash and moisture content of the fuel used in monitoring compliance with permit conditions.

1.8 The source shall install, certify and operate continuous emission monitoring (CEM) equipment for measuring opacity, SO_2, NO_X (including diluent gas either CO_2 or O_2), CO_2, and volumetric flow (40 CFR Part 75). The CEM systems shall meet the requirements in Condition 9.

1.9 This unit is subject to the requirements in 40 CFR Part 60 Subpart A - General Provisions, as adopted by reference in Colorado Regulation No. 6, Part A. Specifically, this unit is subject to the requirements identified in Condition 7.

1.10 Annual emissions for the purposes of APEN reporting and the payment of annual fees shall be calculated as required by Condition 11.

1.11 Compliance with the 20% opacity standard shall be monitored in accordance with the requirements in Condition 10.1.

1.12 Compliance with the 30% opacity standard shall be monitored in accordance with the requirements in Condition 10.2.

1.13 Compliance with the NSPS opacity standard (20% except for one 6 minute average not to exceed 27% in any 60 consecutive minutes) shall be monitored in accordance with the requirements in Condition 10.3.

1.14 This unit is subject to the Title IV Acid Rain Requirements. As specified in 40 CFR Part 72.72(b)(1)(viii), the acid rain permit requirements shall be a complete and segregable portion of the Operating Permit. As such the requirements are found in Section III of this permit.

1.15 The Compliance Assurance Monitoring (CAM) requirements in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV, apply to Boiler 1 (Unit 1) with respect to the particulate matter limitations identified in Condition 1.1 as follows:

1.15.1 The permittee shall follow the CAM Plan provided in Appendix H of this permit. Excursions, for purposes of reporting are as follows:

1.15.1.1 An opacity value greater than 15% occurring for 60 seconds; or

1.15.1.2 Any 24-hour period in which the average opacity exceeds the baseline level established by the performance test required by Conditions 1.1.2 and/or 14.2.2; or

The baseline opacity set by the April 2010 performance test required by Condition 1.1.2 is 5.0 %. This value serves as the baseline opacity until the next required performance test as specified in Conditions 1.1.2 and/or 14.2.2.

1.15.1.3 Failure to perform the annual internal baghouse inspection within 60 days of the scheduled completion date.

1.15.1.4 Failure to perform an additional internal baghouse inspection within three months of an opacity excursion (initial excursion if more than one) as defined in Conditions 1.15.1.1 and 1.15.1.2.

Note that no more than two internal baghouse inspections are required in any calendar year period.

Excursions shall be reported as required by Section V, Conditions 21 and 22.d of this permit.

1.15.2 Operation of Approved Monitoring

1.15.2.1 At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment (40 CFR Part 64 § 64.7(b), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.2.2 Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of these CAM requirements, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions (40 CFR Part 64 § 64.7(c), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.2.3 Response to excursions or exceedances

a. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable (40 CFR Part 64 § 64.7(d)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

b. Determination of whether the owner of operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process (40 CFR Part 64 § 64.7(d)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.2.4 After approval of the monitoring required under the CAM requirements, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the Division and, if necessary submit a proposed modification for this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters (40 CFR Part 64 § 64.7(e), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.3 Quality Improvement Plan (QIP) Requirements

1.15.3.1 Based on the results of a determination made under the provisions of Condition 1.15.2.3.b, the Division may require the owner or operator to develop and implement a QIP (40 CFR Part 64 § 64.8(a), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.3.2 The owner or operator shall maintain a written QIP, if required, and have it available for inspection (40 CFR Part 64 § 64.8(b)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.3.3 The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:

a. Improved preventative maintenance practices (40 CFR Part 64 § 64.8(b)(2)(i), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

b. Process operation changes (40 CFR Part 64 § 64.8(b)(2)(ii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

c. Appropriate improvements to control methods (40 CFR Part 64 § 64.8(b)(2)(iii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

d. Other steps appropriate to correct control performance (40 CFR Part 64 § 64.8(b)(2)(iv), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

e. More frequent or improved monitoring (only in conjunction with one or more steps under Conditions 1.15.3.3.a through d above) (40 CFR Part 64 § 64.8(b)(2)(v), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.3.4 If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the Division if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined (40 CFR Part 64 § 64.8(c), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.3.5 Following implementation of a QIP, upon any subsequent determination pursuant to Condition 1.15.2.3.b, the Division or the U.S. EPA may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:

a. Failed to address the cause of the control device performance problems (40 CFR Part 64 § 64.8(d)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV); or

b. Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions (40 CFR Part 64 § 64.8(d)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.3.6 Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the federal clean air act (40 CFR Part 64 § 64.8(e), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.4 Reporting and Recordkeeping Requirements

1.15.4.1 <u>Reporting Requirements:</u> The reports required by Section V, Condition 22.d, shall contain the information specified in Appendix B of the permit and the following information, as applicable:

a. Summary information on the number, duration and cause (including unknown cause, if applicable), for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable) ((40 CFR Part 64 § 64.9(a)(2)(ii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV); and

b. The owner or operator shall submit, if necessary, a description of the actions taken to implement a QIP during the reporting period as specified in Condition 1.15.3 of this permit. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring (40 CFR Part 64 § 64.9(a)(2)(iii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.4.2 General Recordkeeping Requirements: In addition to the recordkeeping requirements in Section V, Condition 22.a through c.

a. The owner or operator shall maintain records of any written QIP required pursuant to Condition 1.15.3 and any activities undertaken to implement a QIP, and any supporting information required to be maintained under these CAM requirements (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions) (40 CFR Part 64 § 64.9(b)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

b. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements (40 CFR Part 64 § 64.9(b)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.5 Savings Provisions

1.15.5.1 Nothing in these CAM requirements shall excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the federal clean air act. These CAM requirements shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the

purposes of determining the monitoring to be imposed under separate authority under the federal clean air act, including monitoring in permits issued pursuant to title I of the federal clean air act. The purpose of the CAM requirements is to require, as part of the issuance of this Title V operating permit, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of CAM (40 CFR Part 64 § 64.10(a)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.5.2 Nothing in these CAM requirements shall restrict or abrogate the authority of the U.S. EPA or the Division to impose additional or more stringent monitoring, recordkeeping, testing or reporting requirements on any owner or operator of a source under any provision of the federal clean air act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable (40 CFR Part 64 § 64.10(a)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.15.5.3 Nothing in these CAM requirements shall restrict or abrogate the authority of the U.S. EPA or the Division to take any enforcement action under the federal clean air act for any violation of an applicable requirement or of any person to take action under section 304 of the federal clean air act (40 CFR Part 64 § 64.10(a)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.16 **State-Only Requirements:** Unit 1 is subject to the Standards of Performance for Coal-Fired Electric Steam Generating Units in Colorado Regulation No. 6, Part B, Section VIII, as follows:

1.16.1 Beginning January 1, 2012, Hg emissions from Unit 1 shall not exceed 0.0174 lbs/GWh. Compliance with the Hg standard shall be monitored on a twelve (12) month rolling average basis with the first compliance demonstration on December 31, 2012 (Colorado Regulation No. 6, Part B, Section VIII.C.1.a). Hg emissions shall be determined using the Hg monitoring system required by Condition 1.16.2.

1.16.2 The permittee shall comply with the Hg monitoring and recordkeeping requirements as incorporated by reference into Colorado Regulation No. 6, Part A, beginning January 1, 2009, except that Hg monitoring and recordkeeping provisions incorporated by reference into Colorado Regulation No. 6, Part A, addressing the activities listed in Conditions 1.16.2.1 through 4 shall not be required unless otherwise specified (Colorado Regulation No. 6, Part B, Section VIII.D.2). Note that the Hg monitoring and recordkeeping provisions incorporated by reference in Colorado Regulation No. 6, Part A, are specific sections of 40 CFR Part 75.

1.16.2.1 Referenced Hg continuous emission monitoring systems (CEMS) data substitution and bias adjustment for lbs/GWh or percent Hg capture compliance monitoring (Colorado Regulation No. 6, Part B, Section VIII.E.2.a).

1.16.2.2 Referenced Electronic Data Reporting (Colorado Regulation No. 6, Part B, Section VIII.E.2.b).

1.16.2.3 Referenced NIST traceability requirements are not applicable until EPA finalizes its NIST Traceability Protocol and it has been incorporated into Colorado Regulation No. 6, Part A (Colorado Regulation No. 6, Part B, Section VIII.E.2.c).

1.16.2.4 Referenced CEMS QA/QC testing, reporting and recordkeeping of Hg related monitoring equipment (stack flow monitor, CO_2 monitor, moisture monitor) that is already regulated under the Acid Rain Program (Colorado Regulation No. 6, Part B, Section VIII.E.2.d).

1.16.3 In place of reporting requirements for Hg emissions as incorporated by reference into Colorado Regulation No. 6, Part A, the owner or operator shall submit written quarterly reports to the Division within 30 days of the end of each calendar quarter that include the information specified in Conditions 1.16.3.1 through 5. Part A specifies that Hg concentration monitoring and sorbent trap monitoring systems produce a continuous readout or pollutant emission rates or pollutant mass emissions (as applicable) in the appropriate units (e.g., lbs/hr, lbs/MMBtu, ounces/hr, tons/hr). Other appropriate units of measurement may include lbs/GWh, percent Hg capture, and lbs/TBtu, however the Hg emissions reporting specified in this Condition 1.16.3 shall be in units of the applicable standard (Colorado Regulation No. 3, Part VIII.E). The quarterly reports required by this Condition 1.16.3 shall include the following:

1.16.3.1 Applicable Hg lbs/GWh, percent capture or lbs/yr emissions standard in Condition 1.16.1 used to demonstrate compliance (Colorado Regulation No. 6, Part B, Section VIII.E.3.a);

1.16.3.2 For each Hg Budget Unit subject to the emission standards in Condition 1.16.1, above, the three rolling 12 month averages for each calendar month in that calendar quarter in lbs/GWh, percent capture or lbs/yr, depending on the standard used to demonstrate compliance with Condition 1.16.1 (Colorado Regulation No. 6, Part B, Section VIII.E.3.a);

1.16.3.3 Hg Budget Unit operating hours for that quarter (Colorado Regulation No. 6, Part B, Section VIII.E.3.d); and

1.16.3.4 If a continuous Hg monitoring system is used to demonstrate compliance with the Hg monitoring and recordkeeping requirements specified in Condition 1.16.2 of this permit, total and percentage of monitoring system downtime for that quarter (Colorado Regulation No. 6, Part B, Section VIII.E.3.e).

1.16.4 The permittee shall follow the Division-approved monitoring plan submitted in accordance with the requirements in Colorado Regulation No. 6, Part B, Section VIII.E.4.b. For information purposes, the Division-approved monitoring plan is included in Appendix I of this permit.

1.16.5 The permittee is subject to the enforceability requirements in Colorado Regulation No. 6, Part B, Section VIII.F, as follows:

1.16.5.1 The emissions standards, including any Alternative Emission Standards, and Best Available Mercury Control Technology Standards, permitting and monitoring requirements under Colorado Regulation No. 6, Part B, Sections VIII.C, VIII.D, and VIII.E, above, are enforceable. Any violations of permit terms may be enforced by the Division pursuant to Section 25-7-115, C.R.S.

1.16.5.2 If an Hg Budget Unit demonstrates compliance with the compliance plan required by Colorado Regulation No. 6, Part B, Sections VIII.D.4.b and c, above, but did not comply with the applicable emission standards in Condition 1.16.1, above, that unit shall be considered to be in compliance with such emission standards.

2. B001 - Boiler No. 1 (Unit 1), Alternate Fuels for Startup and Flame Stabilization

2.1 The permittee shall maintain records of annual usage of natural gas and the associated annual heat content. This information shall be used as follows:

2.1.1 Annual natural gas consumption shall be used to calculate emissions for the purposes of APEN reporting, as required by Conditions 1.2 and 1.5. The emission factors (EPA's Compilation of Emission Factors (AP-42), Section 1.4 (dated 3/98)) identified in the table below have been approved by the Division and shall be used to calculate emissions.

Pollutant	Emission Factor - Natural Gas
PM	1.9 lbs/MMscf
PM_{10}	1.9 lbs/MMscf
CO	84 lbs/MMscf
VOC	5.5 lbs/MMscf

Annual emissions shall be calculated, for the purposes of APEN reporting and payment of annual fees, using the above emission factors and the annual natural gas usage in the following equation:

$$\text{Tons/yr} = \frac{\text{EF (lbs/MMscf) x Annual Natural Gas Usage (MMscf/yr)]}}{\text{2000 lbs/ton}}$$

2.1.2 If the total annual heat content of natural gas exceeds 5 percent of the total heat content of all fuels combusted, this permit shall be reopened to incorporate appropriate applicable requirements for combusting combined/alternative fuels.

3. B002 – Natural Gas-Fired Auxiliary Boiler, Rated at 98 MMBtu/hr

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
Emission Limitations	3.1	N/A	NO_X 35.4 tons/yr CO 29.7 tons/yr	NO_X: 100 lbs/MMscf CO: 84 lbs/MMscf	Recordkeeping and Calculation	Monthly
Natural Gas Usage	3.2.	N/A	707 MMscf/yr	N/A	Fuel Meter	Monthly
Particulate Matter (PM)	3.3.	0.152 lbs/MMBtu		N/A	Fuel Restriction	Only Natural Gas is Used as Fuel
Opacity	3.4.	Not to Exceed 20% Except as Provided for in Condition 3.5 Below		N/A	See Condition 3.4.	
Opacity	3.5.	For Certain Operational Activities - Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes		N/A	See Condition 3.5.	
MACT Requirements – 40 CFR Part 63 Subpart DDDDD	3.6.	Annual Boiler Tune-Up One-Time Facility Energy Assessment		N/A	See Condition 3.6.	

3.1 NO_X and CO emissions shall not exceed the above limitations (Colorado Construction Permit C-12,093-4, as modified under the provisions of Section I, Condition 1.3 based on requested emissions identified in the APEN submitted May 28, 2009). Monthly emissions from the boiler shall be calculated by the end of the subsequent month using the above emission factors (EF) (from "EPA's Compilation of Emission Factors (AP-42)", Section 1.4 (dated 3/98)) and the monthly natural gas consumption, as required by Condition 3.2 in the following equation:

$$\text{Tons/mo} = \frac{[\text{EF (lbs/MMscf) x monthly natural gas use (MMscf/mo)}]}{\text{2000 lbs/ton}}$$

Monthly emissions shall be summed and used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

3.2 Natural Gas Usage shall not exceed the above limitations (Colorado Construction Permit C-12,093-4, as modified under the provisions of Section I, Condition 1.3 based on the requested fuel consumption rates identified in the APEN submitted May 28, 2009). Natural gas consumed

by the boiler shall be monitored and recorded monthly using fuel meters and corporate records as necessary. Monthly natural gas usage shall be summed and used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

3.3 Particulate Matter (PM) emissions from the boiler shall not exceed the above limitation (Colorado Regulation No. 1, Section III.A.1.b). In the absence of credible evidence to the contrary, compliance with the particulate matter emission limits is presumed since only natural gas and is permitted to be used as fuel in the boiler.

Note that the numeric PM standards were determined using the design heat input for the boiler (98 MMBtu/hr) in the following equation:

$PE = 0.5 \times (FI)^{-0.26,}$ where: PE = particulate standard in lbs/MMBtu
FI = fuel input in MMBtu/hr

3.4 Except as provided for in Condition 3.5, below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity (Colorado Regulation No. 1, Section II.A.1). In the absence of credible evidence to the contrary, compliance with the opacity limitation shall be presumed since only natural gas is permitted to be used as fuel in the boiler.

3.5 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, process modifications or adjustment or occasional cleaning of control equipment which is in excess of 30% for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4). In the absence of credible evidence to the contrary, compliance with the opacity limitation shall be presumed since only natural gas is permitted to be used as fuel in the boiler.

3.6 This boiler is subject to the National Emissions Standards for Hazardous air pollutants from Industrial, Commercial and Institutional Boilers and Process Heaters, 40 CFR Part 63 Subpart DDDDD. Specifically, this boiler is subject to the following requirements:

Note that as specified in the May 18, 2011 Federal Register, the effective dates of this final rule has been delayed until such time as judicial review is no longer pending or until the EPA completes its reconsideration of the rules, whichever is earlier.

When do I have to comply with this subpart? (63.7495)

3.6.1 If you have an existing boiler or process heater, you must comply with this subpart no later than March 21, 2014. (63.7495(b))

3.6.2 You must meet the notification requirements in § 63.7545 according to the schedule in § 63.7545 and in subpart A of this part. Some of the notifications must be

submitted before you are required to comply with the emission limits and work practice standards in this subpart. (63.7495(d))

What emission limitations, work practice standards, and operating limits must I meet? (63.7500)

3.6.3 You must meet the requirements in § 63.7500(a)(1) through (3), except as provided in § 63.7500(b) and (c). You must meet these requirements at all times. (63.7500(a)). Note that the requirements in § 63.7500(a)(2) do not apply to this unit so they have not been included in the permit.

3.6.4 You must meet each emission limit and work practice standard in Tables 1 through 3, and 12 of 40 CFR Part 63 Subpart DDDDD that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under § 63.7522. (63.7500(a)(1)) The work practice standards in Table 3 that apply to this unit are as follows:

3.6.4.1 For each new or existing boiler or process heater with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. (40 CFR Part 63 Subpart DDDDD, Table 3, item 2)

3.6.4.2 At existing boiler or process heater located at a major source facility must have a one-time energy assessment performed on the major source facility by qualified energy assessor. An energy assessment performed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements below, satisfies the energy assessment requirement. (40 CFR Part 63 Subpart DDDDD, Table 3, item 3) The energy assessment must include the following:

a. A visual inspection of the boiler or process heater system.

b. An evaluation of operating characteristics of the facility, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints,

c. An inventory of major energy consuming systems,

d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage,

e. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices,

f. A list of major energy conservation measures,

g. A list of the energy savings potential of the energy conservation measures identified, and

h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

3.6.5 At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (63.7500(a)(3))

3.6.6 As provided in § 63.6(g), EPA may approve use of an alternative to the work practice standards in this section. (63.7500(b))

When must I conduct subsequent performance tests, fuel analyses, or tune-ups? (63.7515)

3.6.7 If you are required to meet an applicable tune-up work practice standard, you must conduct an annual or biennial performance tune-up according to § 63.7540(a)(10) and (a)(11), respectively. Each annual tuneup specified in § 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in § 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. (63.7515(e))

How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards? (63.7530)

3.6.8 You must include with the Notification of Compliance Status a signed certification that the energy assessment was completed according to Table 3 of 40 CFR Part 63 Subpart DDDDD and is an accurate depiction of your facility. (63.7530(e))

3.6.9 You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.7545(e). (63.7530(f))

How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards? (63.7540)

3.6.10 If your boiler or process heater is in either the natural gas, refinery gas, other gas 1, or Metal Process Furnace subcategories and has a heat input capacity of 10 million Btu per hour or greater, you must conduct a tune-up of the boiler or process heater annually to demonstrate continuous compliance as specified below. This requirement does not apply to limited use boilers and process heaters, as defined in § 63.7575. (63.7540(a)(10))

3.6.10.1 As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months) (63.7540(a)(10)(i));

3.6.10.2 Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available (63.7540(a)(10)(ii));

3.6.10.3 Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (63.7540(a)(10)(iii));

3.6.10.4 Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available (63.7540(a)(10)(iv));

3.6.10.5 Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made) (63.7540(a)(10)(v)); and

3.6.10.6 Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section. (63.7540(a)(10)(vi))

3.6.11 If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within one week of startup. (63.7540(a)(12))

What notifications must I submit and when? (63.7545)

3.6.12 You must submit to the Division the initial notification (§ 63.9(b)) and the notification of compliance status (§ 63.9(h)) by the dates specified. (63.7545(a))

3.6.13 As specified in § 63.9(b)(2), if you startup your affected source before May 20, 2011, you must submit an Initial Notification not later than 120 days after May 20, 2011. (63.7545(b))

3.6.14 If you are required to conduct an initial compliance demonstration as specified in § 63.7530(a), you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). For the initial compliance demonstration for each affected source, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/ or other initial compliance demonstrations for the affected source according to § 63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8), as

applicable. (63.7545(e)) The Notification of Compliance Status for the affected sources at this facility shall include the information specified in paragraphs (e)(1), (6), (7) and (8).

3.6.15 If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in § 63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in § 63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section. (63.7545(f))

What reports must I submit and when? (63.7550)

3.6.16 For units that are subject only to a requirement to conduct an annual or biennial tune-up according to § 63.7540(a)(10) or (a)(11), respectively, and not subject to emission limits or operating limits, you may submit only an annual or biennial compliance report, as applicable, as specified in § 63.7550(b)(1) through (5), instead of a semiannual compliance report. (63.7550(b))

3.6.17 The compliance report must contain the information required in § 63.7550(c)(1) through (13). (63.7550(c)) The compliance report for the affected sources at this facility shall include the information specified in paragraphs (c)(1) - (4) and (12).

3.6.18 Each affected source that has obtained a Title V operating permit pursuant to part 70 or part 71 of this chapter must report all deviations as defined in 40 CFR Part 63 Subpart DDDDD in the semiannual monitoring report required by § 70.6(a)(3)(iii)(A) or § 71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 9 of 40 CFR Part 63 Subpart DDDDD along with, or as part of, the semiannual monitoring report required by § 70.6(a)(3)(iii)(A) or § 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice requirement in 40 CFR Part 63 Subpart DDDDD, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the delegated authority. (63.7550(f))

What records must I keep? (63.7555)

3.6.19 You must keep the following records:

3.6.19.1 A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial

Notification or Notification of Compliance Status or semiannual [or annual or biennial as applicable] compliance report that you submitted, according to the requirements in § 63.10(b)(2)(xiv). (63.7555(a)(1))

3.6.19.2 Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in § 63.10(b)(2)(viii). (63.7555(a)(2))

3.6.20 If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuel that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, or other gas 1 fuel, you must keep records of the total hours per calendar year that alternative fuel is burned. (63.7555(h))

In what form and how long must I keep my records? (63.7560)

3.6.21 Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1). (63.7560(a))

3.6.22 As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. (63.7560(b))

3.6.23 You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You can keep the records off site for the remaining 3 years. (63.7560(c))

What parts of the General Provisions apply to me? (63.7565)

3.6.24 Table 10 of 40 CFR Part 63 Subpart DDDDD shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. (63.7565) These requirements include but are not limited to the following:

3.6.24.1 Prohibited activities in § 63.4.

3.6.24.2 Notification requirements in § 63.9.

4. Particulate Matter Emissions - Fugitive Sources

F001 - Coal Handling and Storage

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
PM	4.1.	N/A	35.84 tons/yr	See Appendix G	Recordkeeping and Calculation	As Needed
PM_{10}			8.7 tons/yr			
Coal Unloaded	4.3	N/A	4,000,000 tons/yr	N/A	Recordkeeping	Monthly
Minimize Emissions	4.2.	N/A	N/A	N/A	Certification	Semi-Annually

F002 – Ash Handling and Disposal

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
PM	4.1.	N/A	19.66 tons/yr	See Appendix G	Recordkeeping and Calculation	As Needed
PM_{10}			7.08 tons/yr			
Fly Ash Disposed	4.3.	N/A	136,656 tons/yr	N/A	Recordkeeping	Monthly
Fugitive Particulate Control Plan	4.2.1, 4.4.	N/A	N/A	N/A	Certification	Semi-Annually

F003 - Paved and Unpaved Roads

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
PM	4.1.	N/A	47.9 tons/yr	See Appendix G	Recordkeeping and Calculation	As Needed
PM_{10}			12.2 tons/yr			
Minimize Emissions	4.2.1, 4.4.	N/A	N/A	N/A	Certification	Semi-Annually

4.1 Particulate Matter (PM and PM_{10}) emissions from fugitive emission sources shall not exceed the above limitations (<u>for coal handling</u>: Colorado Construction Permit 12MR093-1, as modified under the provisions of Section I, Condition 1.3 and <u>for ash handling and roads:</u> as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the information provided in the modeling analysis submitted on November 27, 2001). In the absence of credible evidence to the contrary, compliance with the

PM and PM_{10} emission limits are presumed provided the material handling limits (Condition 4.3) are met and control measures (Conditions 4.2 and 4.4) are followed.

Permitted emissions were determined using the emission factors identified in Appendix F of this permit.

Fugitive Particulate Matter emissions are subject to the General Conditions in Section V of this Permit including the Recordkeeping and Reporting requirements listed under Condition 22.

4.2 The source shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions (Colorado Regulation No. 1, Section III.D.1.a).

4.2.1 A fugitive dust control plan, or a modification to an existing plan, shall be required to be submitted if the Division determines that for this source or activity visible emissions are in excess of 20% opacity; or visible emissions are being transported off the property; or if this source or activity is operating with emissions that create a nuisance. The control plan shall be submitted to the Division within the time period specified by the Division (Colorado Regulation No. 1, Section III.D.1.c). The 20% opacity, no off-property transport, and nuisance emission limitations are guidelines and not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 25-7-115 (Colorado Regulation No. 1, Section III.D.1.e.(iii)).

4.3 Materials processed are subject to the following limitations:

4.3.1 Coal unloaded shall not exceed the above limitations (C-12,093-1, as modified under the provisions of Section I, Condition 1.3, based on comments on the draft operating permit received August 22, 2002). The quantity of coal delivered shall be monitored and recorded monthly, using vendor records of coal delivered.

4.3.2 Fly ash disposed of shall not exceed the limitations stated above (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the maximum ash disposal rate identified in the modeling analysis submitted on November 27, 2001). Monthly quantities of fly ash disposed of shall be determined and recorded monthly, using the methodology defined in Condition 5.3.2 and facility records as necessary.

Monthly quantities of fly ash disposed of and coal delivered shall be used in a twelve month rolling total to monitor compliance with annual limitations. Each month, a new twelve month total shall be calculated using the previous twelve months data.

4.4 The source shall certify semi-annually that they have utilized the following control measures to minimize fugitive particulate emissions from ash handling and disposal (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7):

4.4.1 The following control measures shall be used to minimize fugitive particulate matter emissions from ash handling and disposal:

4.4.1.1 Water shall be sprayed on the ash pit as necessary to minimize fugitive emissions.

4.4.1.2 Ash haul trucks shall be covered.

4.4.2 The following control measures shall be used to minimize fugitive particulate matter emissions from vehicle traffic on haul roads:

4.4.2.1 Vehicle speed shall not exceed 15 mph. This limit shall be posted.

4.4.2.2 All active unpaved haul roads shall be watered daily to reduce visible emissions. Daily watering is not required when no haul trucks are using the unpaved roads, following rain or snow events that provide sufficient moisture to control fugitive dust, and when the application of water creates a safety hazard due to ice formation on the roads. Chemical stabilization of the unpaved road surfaces can also be used to reduce the need for daily watering.

5. Particulate Matter Emissions - Point Sources

P001 - Coal Handling System (Crushing, Transfer Tower and Conveying)

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
PM	5.1.	N/A	15.4 tons/yr	See Condition 5.1.	See Condition 5.1.	
PM_{10}		N/A	6.8 tons/yr			
Coal Handled	5.3.	N/A	**Coal Delivered and Sent to Storage:** 4,000,000 tons/yr **Coal from Storage to Plant:** 2,921,460 tons/yr	N/A	Recordkeeping and Calculation	Monthly
Control Device Maintenance	5.4.	N/A	N/A	N/A	Inspections	Quarterly
NSPS General Provisions	5.5.	N/A	N/A	N/A	As Required by NSPS General Provisions	Subject to NSPS General Provisions
Opacity	5.7.	Not to Exceed 20%		N/A	See Condition 5.7.	
NSPS Opacity	5.8.	Less Than 20%		N/A	See Condition 5.8.	

P002 – Ash Silo

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
PM	5.2.	N/A	2.13 tons/yr	0.61 lbs/ton	Recordkeeping and Calculation	Monthly
PM_{10}			2.13 tons/yr	0.61 lbs/ton		
Ash Handled	5.3.	N/A	136,656 tons/yr	N/A	Recordkeeping	Monthly
Opacity	5.6.	Not to Exceed 20%		N/A	See Condition 5.6.	

P003 – Soda Ash Handling System

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
PM	5.2.	N/A	0.007 tons/yr	1.7 lbs/ton	Recordkeeping and Calculation	Monthly
PM_{10}		N/A	0.007 tons/yr	1.7 lbs/ton		
Soda Ash Processed	5.3.	N/A	4,000 tons/yr	N/A	Recordkeeping	Monthly
Opacity	5.6.	Not to Exceed 20%		N/A	See Condition 5.6.	

P004 – One (1) Sorbent Storage Silos

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
PM	5.2.	N/A	0.38 tons/yr	0.043 lbs/hr	Recordkeeping and Calculation	Monthly
PM_{10}		N/A	0.38 tons/yr	0.043 lbs/hr		
Sorbent Processed	5.3.	N/A	560 tons/yr	N/A	Recordkeeping	Monthly
Opacity	5.6.	Not to Exceed 20%		N/A	See Condition 5.6.	
Hours of Operation	5.9.	N/A	N/A	N/A	Recordkeeping	Monthly
Commence Construction	5.10.	Construction Must Commence within 18 Months		N/A	See Condition 5.10.	
Startup Notice	5.11.	Notify Division within 30 Days Before Startup		N/A	Notification	Within 30 Days
Compliance Certification	5.12.	Certify Compliance within 180 Days of Startup of Each Unit		N/A	Certification	Within 180 Days

5.1 Particulate Matter (PM and PM_{10}) emissions, **from the Coal Handling System**, shall not exceed the limitations stated above (Colorado Construction Permit 12MR093-1, as modified under the

provisions of Section I, Condition 1.3). Compliance with the annual limitations shall be monitored as follows:

5.1.1 The plant transfer tower/tripper deck and crusher baghouses shall be operated and maintained in accordance with manufacturers' recommendations and good engineering practices. A copy of the operating and maintenance procedures, schedules for maintenance and/or inspection activities and records related to the operation and maintenance of the baghouses and good engineering practices, such as records of routine maintenance shall be maintained and made available to the Division upon request.

5.1.2 The plant transfer tower/tripper deck and crusher baghouses and the crusher and live storage rotary plows water/surfactant spray systems shall be inspected as required by Condition 5.4.

5.1.3 The conveyors and crushers shall be enclosed and the integrity of the enclosures maintained. Water/surfactant spray suppression systems for the conveyors shall be used as necessary.

5.1.4 The moisture content of the coal, as determined through coal sampling required in Condition 1.7, shall not be less than 9.2%.

5.1.5 The number of transfer points in the coal handling system shall not be increased. Note that permitted emissions are based on 13 transfer points, 5 transfer points from delivery to storage and 8 from storage to the plant.

5.1.6 In the absence of credible evidence to the contrary, compliance with the PM and PM_{10} emission limitations shall be presumed, provided the requirements in Conditions 5.1.1 through 5.1.5 are met and that the coal handling limit identified in Condition 5.3.1 is met.

5.2 Particulate Matter (PM and PM_{10}) emissions **from the ash silo, the soda ash handling system and sorbent silos** are subject to the following limitations:

5.2.1 Particulate Matter (PM and PM_{10}) emissions **from the ash silo** shall not exceed the above limitations (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the information provided in the modeling analysis submitted on November 27, 2001). Monthly emissions shall be calculated by the end of the subsequent month using the above emission factors (EPA's Compilation of Emission Factors (AP-42), dated January 1995, Section 11.17) and the monthly quantity of ash processed, as determined by Condition 5.3.2, in the equations identified below:

Ash Silo Emissions = Silo Loading + Silo Unloading

Where:

$$\text{Silo Loading} = \frac{[\text{EF (lbs/ton) x monthly ash loaded (tons/mo)}]}{2000 \text{ lbs/ton}}\ ;\ \text{Control efficiency} = 99.9\%$$

$$\text{Silo Unloading} = \frac{[\text{EF (lbs/ton) x monthly ash unloaded (tons/mo)}]}{2000 \text{ lbs/ton}};\ \text{Control efficiency} = 95\%$$

Note that in order to use the control efficiencies identified the following conditions shall be met:

5.2.1.1 The boiler baghouse shall be operated and maintained in accordance with the requirements in Condition 8.1.

5.2.1.2 When unloading into an enclosed truck the hose shall be attached, operated and maintained in accordance with good engineering practices. A copy of written procedures for proper hose attachment and maintenance, as well as records related to the maintenance of the hose and good engineering practices, such as records of hose inspections, repair or replacement shall be maintained and made available to the Division upon request.

5.2.2 Particulate Matter (PM and PM_{10}) emissions **from the soda ash handling system** shall not exceed the above limitations (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the requested emissions provided in the APEN received on August 7, 1998). Monthly emissions shall be calculated by the end of the subsequent month using the above emission factors (Background Document for AP-42, Sodium Carbonate Production (formerly Section 5.16, now Section 8.12), dated January 1996, average stack test results for test 23b) and the quantity of soda ash processed the soda ash handling system, as determined by Condition 5.3.3, in the following equation:

$$\text{tons/month} = \frac{\text{EF (lbs/ton) x soda ash processed through system (tons/mo)}}{2000 \text{ lbs/ton}}$$

A control efficiency of 99.9% can be applied to these calculations provided the bin vent filters on the silos and day tanks are operated and maintained in accordance with the requirements in Condition 5.6.2.

5.2.3 Particulate Matter (PM and PM_{10}) emissions **from the sorbent silos** shall not exceed the above limitations (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on requested emissions included on the APEN submitted on December 19, 2008). Monthly emissions shall be calculated by the end of the subsequent month using the above emission factors (based on grain-loading specification (0.01 gr/scf) and the rated air flow of 500 dscfm) and hours of operation, as required by Condition 5.9, in the following equation:

$$\text{Tons/month} = \frac{\text{EF (lbs/hr) x monthly hours of operation (hrs/month)}}{\text{2000 lbs/ton}}$$

Monthly emissions **from ash silo, the soda ash handling system and the sorbent silos** shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

5.3 The quantity of materials processed **through the coal handling system, ash silo, soda ash handling system and sorbent silos** are subject to the following limitations:

5.3.1 The quantity of coal handled **through the Coal Handling System** shall not exceed the above limitation (Colorado Construction Permit 12MR093-1, as modified under the provisions of Section I, Condition 1.3). The quantity of coal handled through the coal handling system shall be monitored and recorded monthly. The quantity of coal handled shall be determined using belt scales and corporate records as necessary.

5.3.2 The quantity of ash processed **through the Ash Silo** shall not exceed the above limitation (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the maximum quantity of ash processed as identified in the November 27, 2001 modeling analysis). The ash processed through the ash silo shall be monitored and recorded monthly. The quantity of ash processed shall be determined using the average ash content of the coal, as determined through coal sampling required in Condition 1.7 and coal consumption records (Condition 1.6). An 80% fly-ash factor shall be assumed.

5.3.3 The quantity of soda ash processed **through the Soda Ash Handling System** shall not exceed the above limitation (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the requested throughput provided in the APEN received on August 7, 1998). The quantity of soda ash handled **through the Soda Ash Handling System** shall be monitored and recorded monthly.

5.3.4 The quantity of sorbent processed **through the Sorbent Silos** shall not exceed the above limitation (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the information provided in the December 19, 2008 permit application). The quantity of sorbent handled **through the Sorbent Silos** shall be monitored and recorded monthly.

Monthly quantities of material processed through **the coal handling system, ash silo, soda ash handling system and sorbent silos** shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

5.4 The plant transfer tower/tripper deck and crusher baghouses and the water/surfactant spray systems on the crusher and the live storage rotary plows are subject to the following inspection requirements:

5.4.1 The permittee shall conduct inspections of each baghouse and the spray systems on at least a quarterly basis and perform any necessary repairs or maintenance pursuant to the quarterly inspections (Compliance Order on Consent, Issued February 27, 1996, Paragraph II.7).

5.4.2 The permittee shall maintain records of each inspection required in Condition 5.4.1 above. The records shall be kept on site and shall be made available to Division inspectors, or their duly delegated representatives, upon request, and may be kept in computerized format. The Division considers that if the PSCo inspector has signed the inspection or work order form with no comments, the inspection has been fully performed and no problems with the control equipment were noted (Compliance Order on Consent, Issued February 27, 1996, Paragraph II.8).

5.5 The following portions of the coal handling system (conveyors 7 thru 13, 17 and 18) are subject to the requirement in 40 CFR Part 60, Subpart A – General Provisions, as adopted by Colorado Regulation No. 6, Part A. Specifically the coal handling system is subject to the following requirement and the requirements in Condition 7.

5.5.1 The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility or any malfunction of the air pollution control equipment (40 CFR Part 60 Subpart A § 60.7(b), as adopted by reference in Colorado Regulation No. 6, Part A).

5.6 Opacity of emissions **from the ash silo, the soda ash silo, each soda ash day tank and each sorbent silo** shall not exceed 20% (Colorado Regulation No. 1, Section II.A.1). Compliance with the opacity limitation shall be monitored as follows:

5.6.1 In the absence of credible evidence to the contrary, **the Ash Silo** shall be presumed to be in compliance with the 20% opacity limit provided the requirements in Conditions 5.2.1.1 and 5.2.1.2 are met.

5.6.2 In the absence of credible evidence to the contrary, **the Soda Ash Silo and each Soda Ash Day tank** shall be presumed to be in compliance with the 20% opacity limit provided the bin vent filters are operated and maintained in accordance with manufacturer's recommendations and good engineering practices. A copy of the operating and maintenance procedures, schedules for maintenance and/or inspection activities and records related to the operation and maintenance of the bin vent filters and good engineering practices, such as records of routine maintenance and/or inspections shall be maintained and made available to the Division upon request.

5.6.3 In the absence of credible evidence to the contrary, **each Sorbent Silo** shall be presumed to be in compliance with the 20% opacity limit provided the bin vent filters are operated and maintained in accordance with manufacturer's recommendations and good engineering practices. A copy of the operating and maintenance procedures, schedules for maintenance and/or inspection activities and records related to the operation and maintenance of the bin vent filters and good engineering practices, such as records of routine maintenance and/or inspections shall be maintained and made available to the Division upon request.

5.7 Opacity of emissions from **the coal handling system** shall not exceed 20% (Colorado Regulation No. 1, Section II.A.1). Compliance with the opacity requirements shall be monitored as follows:

5.7.1 In the absence of credible evidence to the contrary, the coal handling system shall be presumed to be in compliance with the opacity requirements provided the requirements in Conditions 5.1.1 through 5.1.3 are met.

5.7.2 The bag leak detectors on the transfer tower/tripper deck and crusher baghouses shall be operated and maintained in accordance with manufacturer's recommendations and good engineering practices. A copy of the operating and maintenance procedures, and records related to the operation and maintenance of the bag leak detectors and good engineering practices, such as records of routine maintenance and/or inspections shall be maintained and made available to the Division upon request. The bag leak detectors shall be equipped with alarms to detect the presence of particulates at the baghouse outlets. Records shall be maintained of any corrective actions taken on the baghouses as a result of the bag leak detector alarm.

5.7.3 A one (1) minute visible emission observation using EPA Method 22 shall be conducted on the transfer tower/tripper deck and crusher baghouses monthly. If visible emissions are observed, the permittee shall follow the steps in Conditions 5.7.5 and 5.7.6.

5.7.4 As soon as practicable after the bag leak detector alarm signal is sent a one (1) minute visible emission observation using EPA Method 22 shall be conducted on the coal handling system. Such observation shall be made from a location in which the entire coal handling system (crushers, transfer tower and conveyors) can be observed. If the coal handling system cannot be observed from one point, then subsequent one (1) minute observations shall be conducted until the entire system can be observed. If visible emissions are observed, the permittee shall follow the steps in Conditions 5.7.5 and 5.7.6. The permittee shall maintain records of the date and the time the bag leak detector alarm is sent, the Method 22 observation is performed and the baghouse is restarted.

5.7.5 If visible emissions are observed during the observations required by Conditions 5.7.3 and 5.7.4, the permittee shall investigate the source of visible emissions and make any repairs or adjustments necessary. Records shall be maintained of any baghouse repairs or adjustments.

5.7.6 If, after maintenance and/or adjustments have been performed, visible emissions persist for longer than one hour, a six (6) minute EPA Reference Method 9 opacity observation shall be performed to monitor compliance with the opacity limits. Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

5.7.7 Certification is not required for Method 22 observations but persons performing Method 22 visible emission observations shall be trained to determine the presence of visible emissions. A list of observers trained to perform the visible emission observations shall be maintained.

5.7.8 The EPA Reference Method 9 opacity observations shall be performed by an observer with current and valid Method 9 certification. All observations shall be recorded and kept on site to be made available to the Division upon request.

5.8 The owner or operator shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system or coal transfer and loading system processing coal, gases which exhibit 20% opacity or greater (40 CFR Part 60 Subpart Y § 60.252, as adopted by reference in Colorado Regulation No. 6, Part A).

These opacity provisions apply to the following pieces of equipment: both crushers and conveyors 7 thru 13, 17 and 18. This includes the transfer tower/tripper deck and crusher baghouses.

Compliance with the opacity requirements shall be monitored as follows:

5.8.1 In the absence of credible evidence to the contrary, the coal handling system shall be presumed to be in compliance with the opacity requirements provided the requirements in Conditions 5.1.1 through 5.1.3 are met and the coal handling system visible emission observation required by Condition 5.7.4 indicates compliance with the opacity limits in Condition 5.8.

5.8.2 In the absence of credible evidence to the contrary, compliance with the opacity standard for the transfer tower/tripper deck and crusher baghouses is presumed provided the requirements in Condition 5.7.2 are met and the visible emission observations required by Conditions 5.7.3 and 5.7.4 meet the opacity standard specified in Condition 5.8.

5.9 Hours of operation of **each Sorbent Silo** shall be monitored monthly and recorded and maintained to be made available to the Division upon request. The hours of operation shall be used to calculate the monthly emissions as required by Condition 5.2.3.

5.10 The permit conditions in this Section II.5 of this permit, **that apply to the Sorbent Silos**, shall expire if construction does not commence within 18 months of issuance of the renewal permit [January 1, 2010]; construction is discontinued for a period of 18 months of more; or construction is not completed within a reasonable time of the estimated completion date (Colorado Regulation No. 3, Part B, Section III.F.4.a.(i) thru (ii)).

5.11 The permittee shall notify the Division, in writing, thirty (30) days prior to startup of **the Sorbent Silos** (Colorado Regulation No. 3, Part B, Section III.G.1).

5.12 Within one hundred eighty (180) calendar days after commencement of operation **of the Sorbent Silos**, the permittee shall certify compliance with the conditions in this Section II.5 of this permit **that apply to the Sorbent Silos** (Colorado Regulation No. 3, Part B, Section III.G.2). Submittal of the first required semi-annual monitoring report (Appendix B), after startup of the sorbent silos shall serve as the self-certification that the newly installed sorbent silos can comply with the conditions in this Section II.5 of this permit that apply to them.

6. M001–Cooling Water Tower

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
Water Circulated	6.1.	N/A	99,864 MMgal/yr	N/A	Recordkeeping	Monthly
Total Dissolved Solids Analysis	6.2.	N/A	N/A	N/A	Laboratory Analysis	Semi-Annually
PM	6.3.	N/A	36.5 tons/yr	See Condition 6.3	Recordkeeping and Calculation	Monthly
PM_{10}			36.5 tons/yr			
VOC			2.6 tons/yr	0.0527 lbs/MMgal (as $CHCl_3$)		
Opacity	6.4.	Not to Exceed 20%		N/A	See Condition 6.4	

6.1 The water circulated through the cooling water tower shall not exceed the above limitation (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the maximum water circulation rate identified in the modeling analysis submitted on November 27, 2001). The quantity of water circulated through the tower shall be monitored and recorded monthly. Monthly quantities of water circulated shall be used in the emission calculations identified in Condition 6.3. Monthly quantities of water circulated shall be used in a twelve month rolling total to monitor compliance with the annual limitation. Each month, a new twelve month total shall be calculated using the previous twelve months data.

6.2 Samples of water circulated from the tower shall be taken and analyzed to determine the total solids concentration semi-annually. The total solids concentration shall be used to calculate particulate matter emissions as required by Condition 6.3. A copy of the procedures used to obtain and analyze samples shall be maintained and made available to the Division upon request.

6.3 Emissions of PM, PM_{10} and VOC from the cooling water tower shall not exceed the above limitations (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the emissions identified in the modeling analysis submitted on November 27, 2001). Emissions shall be calculated monthly for the tower using the equations identified below.

$$PM = PM_{10}\ (\text{tons/month}) = \frac{Q \times d \times \%\ \text{drift} \times 31.3\%\ \text{drift dispersed} \times \text{total solids concentration}}{2000\ \text{lbs/ton}}$$

Where:
Q = water circulated, gal/month
d = density of water, lbs/gal (from T5 application d = 8.34 lbs/gal)
% drift = 0.001% (from T5 application)
31.3% drift dispersed (from EPA-600/7-79-251a, November 1979, AEffects of Pathogenic and Toxic Materials Transported Via Cooling Device Drift - Volume1 - Technical Report@, Page 63)
Total solids concentration = total solids concentration, in ppm (lbs solids/10^6 lbs water) - to be determined by Condition 6.2.

$$VOC = CHCl_3\ (\text{tons/month}) = \frac{Q \times EF \times (1\ \text{MMgal}/10^6\ \text{gal})}{2000\ \text{lbs/ton}}$$

Where:
Q = water circulated, gal/yr or gal/month
EF = 0.0527 lbs/MMgal (from letter from Wayne C. Micheletti to Ed Lasnic, dated November 11, 1992)

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

6.4 Opacity of emissions from the cooling water tower shall not exceed 20% (Colorado Regulation No. 1, Section II.A.1). In the absence of credible evidence to the contrary, compliance with the opacity standard shall be presumed, provided the drift eliminators on the tower are operated and maintained in accordance with the manufacturers' recommendations and good engineering practices.

7. NSPS General Provisions

7.1 At all times, including periods of startup, shutdown, and malfunction owners and operators shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may

include, but is not limited to monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source (40 CFR Part 60 Subpart A § 60.11(d) as adopted by Reference in Colorado Regulation No. 6, Part A).

7.2 No article, machine, equipment or process shall be used to conceal an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gasses discharged to the atmosphere (40 CFR Part 60 Subpart A § 60.12, as adopted by reference in Colorado Regulation No. 6, Part A).

8. Particulate Matter Emission Periodic Monitoring Requirements

8.1 Operation and Maintenance Requirements

The boiler baghouse shall be maintained and operated in accordance with good engineering practices. Any maintenance performed on the boiler baghouses shall be documented and made available to the Division upon request.

8.2 Stack Testing

Stack testing for particulate matter emissions shall be performed on the main boiler within 180 days of renewal permit issuance [January 1, 2010] in accordance with the requirements and procedures set forth in EPA Test Method 5 as set forth in 40 CFR Part 60, Appendix A. Frequency of testing, thereafter shall be annual except that: (1) if the first test required by this renewal permit or any subsequent test results indicate emissions are less than or equal to 50% of the emission limit, another test is required within five years; (2) if the first test required by this renewal permit or any subsequent test results indicate emissions are more than 50%, but less than or equal to 75% of the emission limit, another test is required within three years; (3) if the first test required by this renewal permit or any subsequent test results indicate emissions are greater than 75% of the emission limit, an annual test is required until the provisions of (1) or (2) are met.

A stack testing protocol shall be submitted for Division approval at least thirty (30) calendar days prior to any performance of the test required under this condition. No stack test required herein shall be performed without prior written approval of the protocol by the Division. The Division reserves the right to witness the test. In order to facilitate the Division's ability to make plans to witness the test, notice of the date (s) for the stack test shall be submitted to the Division at least thirty (30) calendar days prior to the test. The Division may for good cause shown, waive this thirty (30) day notice requirement. In instances when a scheduling conflict is presented, the Division shall immediately contact the permittee in order to explore the possibility of making modifications to the stack test schedule. The required number of copies of the compliance test results shall be submitted to the Division within forty-five (45) calendar days of the completion of the test unless a longer period is approved by the Division.

9. Continuous Emission Monitoring and Continuous Opacity Monitoring Systems

9.1 CEM and COM Monitoring Systems QA/QC Plan

Continuous Emission Monitoring (CEM) and Continuous Opacity Monitoring (COM) systems are required for measurement of the stack SO_2, CO_2, NO_X (and diluent monitor for either CO_2 or O_2), gas flow rate and opacity emissions. The quality assurance/quality control plan required by 40 CFR Part 75, Appendix B shall be made available to the Division upon request. Revisions shall be made to the plan at the request of the Division.

9.2 General Provisions

9.2.1 The permittee shall ensure that all continuous emission and opacity monitoring systems required are in operation and monitoring unit emissions or opacity at all times that the boiler combusts any fuel except as provided in 40 CFR Part 75 § 75.11(e) and during periods of calibration, quality assurance, or preventative maintenance performed pursuant to 40 CFR Part 75 § 75.21 and Appendix B, periods of repair, periods of backups of data from a data acquisition and handling system or recertification performed pursuant to 40 CFR Part 75 § 75.20. The permittee shall also ensure, subject to the exceptions just noted, that the continuous opacity monitoring systems required are in operation and monitoring opacity during the time following combustion when fans are still operating unless fan operation is not required to be included under any other applicable requirement (40 CFR Part 75 § 75.10(d)).

9.2.2 Alternative monitoring system, alternative reference method, or any other alternative for the required continuous emission monitoring systems shall not be used without having obtained prior written approval from the appropriate agency, either the Division or the U.S. EPA, depending on which agency is authorized to approve such alternative under applicable law. Any alternative continuous emission monitoring systems or continuous opacity monitoring systems must be certified in accordance with the requirements of 40 CFR Part 75 prior to use.

9.2.3 All test and monitoring equipment, methods, procedures and reporting shall be subject to the review and approval by the appropriate agency, either the Division or the U.S.EPA, depending on which agency is authorized to approve such alternative under applicable law, prior to any official use. The Division shall have the right to inspect such equipment, methods and procedures and data obtained at any time. The Division shall provide a witness(es) for any and all tests as Division resources permit.

9.2.4 A file shall be maintained of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on

these systems or devices; and all other information required by applicable portions of 40 CFR Part 75 recorded in a permanent form suitable for inspection.

9.2.5 Records shall be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the source; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative (40 CFR Part 60 Subpart A § 60.7(b), as adopted by reference in Colorado Regulation No. 6, Part A).

9.3 Continuous Emission Monitoring (CEM) Systems

9.3.1 The Continuous Emission Monitoring (CEM) Systems are subject to the requirements of 40 CFR Part 75. Each monitoring system shall meet the equipment, installation and performance specifications of 40 CFR Part 75, Appendix A.

9.3.2 The permittee shall follow the 40 CFR Part 75 quality assurance and quality control procedures of Appendix B and the conversion procedures of Appendix F. For purposes of monitoring compliance with the SO_2 emission limitations in Condition 1.3, hourly SO_2 data shall be converted to lbs/MMBtu in accordance with the procedures in 40 CFR Part 60 Appendix A Method 19.

9.4 Continuous Opacity Monitoring (COM) Systems

9.4.1 The Continuous Opacity Monitoring (COM) Systems are subject to the requirements of 40 CFR Part 75. Each continuous opacity monitoring system shall meet the design, installation, equipment and performance specifications in 40 CFR Part 60, Appendix B, Performance Specification 1.

9.4.2 The permittee shall follow the quality assurance and quality control procedures of 40 CFR Part 60, Subpart A §60.13(d) and Subpart D § 60.45(c)(3).

9.4.3 When the opacity monitoring system is unable to provide quality assured data in accordance with 40 CFR Part 75 for more than eight (8) consecutive hours, the source shall utilize either a backup opacity monitor or EPA Reference Method 9, or an "Operating Report During Monitor Unavailability" to satisfy the requirements for periodic monitoring under 40 CFR 70 and Colorado Regulation No. 3.

If backup monitors are used, the next quarterly report submitted by the source shall identify the dates and times the backup monitors were in use.

If EPA Reference Method 9 observations are used, visual observations in accordance with the reference method shall be taken and recorded by the source whenever the source is in operation and while fuel is present in the boiler.

When such circumstances exist, the visual observations shall be performed by a certified opacity observer each 24 hour period thereafter over a thirty minute period until the opacity monitoring system is again able to provide quality assured data. If a visual emissions observation cannot be performed in accordance with EPA Reference Method 9, the source shall record the reasons why that is the case. Subject to the provisions of C.R.S. § 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

If an "Operating Report During Monitor Unavailability" is used, the source shall record the opacity monitor registered reading prior to the monitor unavailability period and that immediately following such periods. A source must also record and maintain a description of unit operating characteristics that demonstrate the likelihood of compliance with the applicable opacity limitation. Such operating circumstances shall be identified on a unit specific basis and provided to the Division and shall include information related to the operation of the control equipment and any other operational parameters that may affect opacity.

9.5 Notification and Recordkeeping

9.5.1 The owner or operator of a facility required to install, maintain, and calibrate continuous monitoring equipment shall submit to the Division, by the end of the calendar month following the end of each calendar quarter, a report of excess emissions for all pollutants monitored for that quarter (40 CFR Part 60 Subpart A § 60.7(c)). This report shall consist of the following information and/or reporting requirements as specified by the Division:

9.5.1.1 The magnitude of excess emissions computed in accordance with 40 CFR Part 60 Subpart A § 60.13(h) and Division guidelines, as applicable, any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions and the process operating time during the reporting period (40 CFR Part 60 Subpart A § 60.7(c)(1)).

9.5.1.2 Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted (40 CFR Part 60 Subpart A § 60.7(c)(2)).

9.5.1.3 The date and time identifying each period of equipment (continuous emission monitoring equipment) malfunction and the nature of the system repairs or adjustments, if any, made to correct the malfunction (40 CFR Part 60 Subpart A § 60.7(c)(3)).

9.5.1.4 When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report (40 CFR Part 60 Subpart A § 60.7(c)(4)).

9.5.2 The owner or operator of a facility required to install, maintain, and calibrate continuous monitoring equipment shall submit to the Division, by the end of the calendar month following the end of each calendar quarter, a summary report for that quarter (40 CFR Part 60 Subpart A § 60.7(c)). One summary report form shall be submitted for each pollutant monitored. This report shall contain the information and be presented in the format provided in 40 CFR Part 60 Subpart A § 60.7(d), Figure 1.

If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and continuous monitoring system (CMS) downtime is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in Condition 9.5.1 need not be submitted unless required by the Division (40 CFR Part 60 Subpart A § 60.7(d)(1)).

9.5.3 If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in Condition 9.5.1 shall both be submitted (40 CFR Part 60 Subpart A § 60.7(d)(1)).

10. Opacity Requirements and Periodic Monitoring

10.1 Opacity – Colorado Regulation No. 1, Section II.A.1

Except as provided for in Condition 10.2 below, no owner or operators of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity (Colorado Regulation No. 1, Section II.A.1).

The permittee shall operate, calibrate and maintain a continuous in-stack monitoring device for the measurement of opacity. Unless otherwise specified in this permit, the continuous opacity monitor (COM) shall be used to monitor compliance with the 20% opacity limit set forth above. The requirements for the opacity monitoring system are defined in Condition 9 of this permit.

10.2 Opacity – Colorado Regulation No. 1, Section II.A.4

No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, process modifications or adjustment or occasional cleaning of control equipment which is in excess of 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4). Compliance with this

standard shall be monitored, during the aforementioned events, using the continuous opacity monitor (COM) as required by this permit.

The permittee shall operate, calibrate and maintain a continuous in-stack monitoring device for the measurement of opacity. Unless otherwise specified in this permit, the continuous opacity monitor (COM) shall be used to monitor compliance with the 30% opacity limit set forth above. The requirements for the opacity monitoring system are defined in Condition 9 of this permit.

A record shall be kept of the type, date and time of the commencement and completion of each and every condition subject to Colorado Regulation No. 1, Section II.A.4 that results in an exceedance. The records shall be made available for review upon request by the Division.

10.3 NSPS Opacity Requirements

Opacity of emissions shall not exceed 20% for any six-minute period, except for one six-minute period not to exceed 27% per hour (40 CFR Part 60 Subpart D § 60.42(a)(2), as adopted by reference in Colorado Regulation No. 6, Part A). Compliance with this standard shall be monitored using the continuous opacity monitor (COM) as required by this permit.

Note that this opacity standard shall apply at all times except during periods of startup, shutdown and malfunction (40 CFR Part 60 Subpart A § 60.11(c), as adopted by reference in Colorado Regulation No. 6, Part A), however, those instances during startup, shutdown and malfunction when the opacity standard is exceeded shall be identified in the Excess Emission Report required by Condition 9.5.

Also note that this opacity standard is more stringent than the opacity standard identified in Condition 10.2 during periods of fire building, cleaning of fire boxes, soot blowing, process modifications, and adjustment and occasional cleaning of control equipment.

11. Lead Periodic Monitoring

Lead emissions from the facility are subject to the General Conditions in Section V of this Permit including Recordkeeping and Reporting requirements and Fee Payment listed under Conditions 22 and 8. Annual emissions for the purposes of APEN reporting and payment of annual fees shall be based on the information submitted in the annual Toxic Release Inventory (TRI) report. The TRI report and calculation methodology shall be made available to the Division upon request.

12. Coal Sampling Requirements

Coal shall be sampled to determine the heat content, weight percent sulfur, weight percent ash and moisture content of the coal. Vendor receipts used for contractual purposes to insure fuel is delivered within specifications shall be adequate to provide the necessary data for the purposes of emission calculations and monitoring compliance with permit conditions. The permittee shall use vendor sample results from all shipments of coal received.

13. Emission Factors

The permittee shall comply with the provisions of Regulation No. 3 concerning APEN reporting. Emission factors that are approved compliance factors specified within this permit can not be adjusted without requiring a permit modification. Emission factors and/or other emission estimating methods used only to comply with the reporting requirements of this regulation can be updated and modified as specified. These changes by themselves, do not require any permitting activities though the resulting emission estimate may trigger permitting activities."

14. Regional Haze Requirements – Unit 1 Boiler

The Regional Haze Requirements included in this section are **State-only** Enforceable until EPA's approves Colorado's Regional Haze State Implementation Plan (SIP).

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
NO_X	14.1	0.07 lb/MMBtu, on a 30-day rolling average		N/A	Continuous Emission Monitor	Continuous
SO_2			0.12 lbs/mmBu, on a 30-day rolling average			
PM	14.2	0.03 lb/MMBtu		N/A	Baghouse Maintenance, Source Testing and CAM	See Condition 14.2
Compliance Date	14.3	By December 31, 2014		N/A	See Condition 14.3	
Recordkeeping and Reporting Requirements	14.3	See Condition 14.4		N/A	See Condition 14.4	

14.1 NO_X and SO_2 Emission Limitations (Colorado Regulation No. 3, Part F, Section VI.C.2)

14.1.1 NO_X emissions from Unit 1 shall not exceed 0.07 lb/MMBtu, on a 30-day rolling average.

14.1.2 SO_2 emissions from Unit 1 shall not exceed 0.12 lb/MMBtu, on 30-day rolling average.

Compliance with the SO_2 and NO_X emission limitations shall be monitored as follows:

14.1.3 The owner or operator of a boiler subject to this section shall comply with the Part 75 monitoring and recordkeeping requirements as specified in Condition 9 of this permit with the exception of the CEMS data substitution and bias adjustment requirements.

At all times after the compliance deadline specified in Condition 14.3 of this permit, the owner/operator of each BART, RP, or BART alternative program unit shall maintain, calibrate, and operate a CEMS, in full compliance with the requirements found at 40 CFR Part 75 not excluded above, to accurately measure from such unit SO_2, NO_X, diluent, and stack gas volumetric flow rate as such parameters are relevant to the applicable emission limit. The CEMS shall be used to determine compliance with the SO_2 and NO_X Regional Haze emission limits for each such unit. Such limits are expressed in units of pounds per million Btu. The owner/operator shall calculate emissions in the applicable units.

In determining compliance with the SO_2 and NO_X Regional Haze limits, all periods of emissions shall be included, including startups, shutdowns, emergencies, and malfunction.

(Colorado Regulation No. 3, Part F, Section VII.B.1.a)

14.1.4 For any hour in which fuel is combusted in the BART, RP, or BART alternative program unit, owner/operator shall calculate hourly average SO_2 and NO_X concentrations in pounds per million Btu at the CEMS in accordance with the requirements of 40 CFR Part 75 except for Part 75 requirements excluded by Section VII.B.1.a (Condition 14.1.3). These hourly averages shall then be used to determine compliance in accordance with the particular limit's averaging period, as follows (Colorado Regulation No. 3, Part F, Section VII.B.1.a.(i)(1)):

14.1.4.1 Regional Haze limits with a 30-day averaging period: Before the end of each operating day, the owner/operator shall calculate and record the 30-day rolling average emission rate in lb/MMBtu from all valid hourly emission values from the CEMS for the previous 30 operating days. (Colorado Regulation No. 3, Part F, Section VII.B.1.a.(i)(2))

14.1.4.2 "Operating day" means any twenty-four-hour period between midnight and the following midnight during which any fuel is combusted at any time in a BART unit, BART alternative program unit, or Reasonable Progress unit. (Colorado Regulation No. 3, Part F, Section VII.A.4)

14.2 PM emissions from Unit 1 shall not exceed 0.03 lb/MMBtu. (Colorado Regulation No. 3, Part F, Section VI.C.2) Compliance with the PM emission limitation shall be monitored as follows:

14.2.1 Unless particulate compliance testing was completed within the previous 6 months, within 60 days of the compliance deadline specified in Condition 14.3 of this permit, the owner/operator shall conduct a stack test to measure particulate emissions in accordance with the requirements and procedures set forth in EPA Test Method 5 as set forth in 40 CFR Part 60, Appendix A. Stack testing for particulate matter shall be performed annually, except that: (1) if any test results indicate emissions are less than or equal to 50% of the emission limit, another test is required within five years; (2) if

any test results indicate emissions are more than 50%, but less than or equal to 75% of the emission limit, another test is required within three years; and (3) if any test results indicate emissions are greater than 75% of the emission limit, an annual test is required until the provisions of (1) or (2) are met. A test run shall consist of three test runs, with each run at least 120 minutes in duration. Test results shall be converted to the applicable units and compliance will the based on the average of the three test runs. (Colorado Regulation No. 3, Part F, Section VII.C)

14.2.2 During each of the performance tests conducted as required Condition 14.2.1, a baseline opacity limit shall be established for the CAM requirements specified in Condition 1.15. The value of the baseline opacity level is determined by averaging all of the 6-minute average opacity values (reported to the nearest 0.1 percent opacity) from the COMS measurement recorded during each of the test run intervals conducted for the performance test, and then adding the appropriate percent opacity (see table below) to the calculated average value for all of the test runs.

Results of PM performance test	Opacity to add-on
Less than or equal to 50% of the PM standard	3.5 %
Greater than 50% of the PM standard	2.5 %

If the calculated opacity value (COMS average plus add-on) is less than 5.0 percent, then the opacity baseline level is set at 5.0 percent.

The permittee shall submit the proposed baseline opacity determined from the initial test and any subsequent performance tests required by Condition 14.2.1 for Division approval and begin monitoring under the new baseline within 45 calendar days of the test. The proposed baseline opacity submittal shall include the justification and supporting data for the proposed baseline opacity and any add-on values (e.g., 2.5% or 3.5% as indicated above). In addition, the permittee shall submit with the proposed baseline opacity a minor modification application to revise the permit to incorporate the proposed baseline opacity as the indicator range for the 24-hr average opacity.

14.2.3 In addition, to the stack tests described in Condition 14.2.1, the owner/operator shall monitor compliance with the particulate matter limits in accordance with the applicable compliance assurance monitoring plan developed and approved in accordance with 40 CFR Part 64. (Colorado Regulation No. 3, Part F, Section VII.C) The compliance assurance monitoring requirements are specified in Condition 1.15 of this permit and the compliance assurance monitoring plan is included in Appendix H of this permit.

14.3 Unit 1 must comply with the limits and averaging times specified in Conditions 14.1 and 14.2 no later than December 31, 2014. 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. (Colorado Regulation No. 3, Part F, Section VI.C.3)

14.4 Recordkeeping and Reporting Requirements

14.4.1 The owner/operating shall maintain the following records for at least five years (Colorado Regulation No. 3, Part F, Section VII.D):

14.4.1.1 All CEMS data as required in the applicable regulation, stack test data, and data collected pursuant to the CAM plan, including the date, place, and time of sampling, measurement, or testing; parameters sampled, measured, or tested and results; the company, entity, or person that performed the testing, if applicable; and any field data sheets from testing. (Colorado Regulation No. 3, Part F, Section VII.D.1)

14.4.1.2 Records of quality assurance and quality control activities for emissions measuring systems including, but not limited to, any records required by 40 CFR Part 60, 63, or 75. (Colorado Regulation No. 3, Part F, Section VII.D.2)

14.4.2 The owner/operator of a BART, RP or BART alternative program unit shall submit semi-annual excess emissions reports no later than the 30th day following the end of each semi-annual period unless more frequent reporting is required. Excess emissions means emissions that exceed the Regional Haze emissions limits. Excess emission reports shall include the information specified in 40 CFR Part 60, Section 60.7(c). (Colorado Regulation No. 3, Part F, Section VII.E) Frequency of excess emission reports shall be quarterly as specified in Condition 9.5.

14.4.3 The owner/operator of a BART, RP or BART alternative program unit shall submit reports of any required performance stack tests for particulate matter, to the Division within 60 calendar days after completion of the test. (Colorado Regulation No. 3, Part F, Section VII.E)

15. M002 - Diesel Fuel Fired Internal Combustion Engine

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
MACT ZZZZ Requirements	15.1.	Change Oil and Filter Inspect Air Cleaner Inspect all Hoses and Belts		N/A	See Condition 15.1.	
SO_2	15.2.	0.8 lbs/MMBtu		N/A	Fuel Restriction	Only Diesel Fuel is Used as Fuel
Opacity	15.3	Not to Exceed 20% Except as Provided for Below		N/A	EPA Method 9	See Condition 15.3
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes				
MACT General Provisions	15.4.	N/A	N/A	N/A	See Condition 15 .4	

Note that this emission unit is exempt from the APEN reporting requirements in Regulation No. 3, Part A and the construction permit requirements in Regulation No. 3, Part B.

15.1 This engine is subject to the requirements in 40 CFR Part 63 Subpart ZZZZ, "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines", as follows:

These requirements included in this Condition 15.1 are only federally enforceable. As of the date of revised permit issuance [November 15, 2011], the requirements in 40 CFR Part 63 Subpart ZZZZ promulgated on March 3, 2010 have not been adopted into Colorado Regulation No. 8, Part E by the Division and are therefore not state-enforceable. In the event that the Division adopts these requirements this engine will be subject to the APEN reporting and minor source permitting requirements and these requirements will be state-enforceable.

When do I have to comply with this subpart (§ 60.6595)

15.1.1 If you have an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013. (§ 63.6595(a)(1))

What emission limitations must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions (§ 63.6602)

15.1.2 If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c of 40 CFR Part 63 Subpart ZZZZ which apply to you. Compliance with the numerical emission limitations established of 40 CFR Part 63 Subpart ZZZZ is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 of 40 CFR Part 63 Subpart ZZZZ. (§ 63.6602)

Note that this engine is not subject to emission limitations but is subject to work practice standards.

The requirements in Table 2c of 40 CFR Part 63 Subpart ZZZZ that apply to this engine, except during periods of startup are as follows:

15.1.2.1 Change oil and filter every 500 hours of operation or annually whichever comes first. (40 CFR Part 63 Subpart ZZZZ, Table 2c, item 1.a)

15.1.2.2 Inspect air cleaner every 1,000 hours of operation or annually whichever comes first. (40 CFR Part 63 Subpart ZZZZ ,Table 2c, item 1.b)

15.1.2.3 Inspect all hoses and belts every 500 hours of operation or annually whichever comes first, and replace as necessary. (40 CFR Part 63 Subpart ZZZZ Table 2c, item 1.c)

The requirements in Table 2c of 40 CFR Part 63 Subpart ZZZZ that apply to this engine during periods of startup are as follows:

15.1.2.4 Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. (40 CFR Part 63 Subpart ZZZZ Table 2c, item 1)

Notwithstanding the above requirements, the following applies:

15.1.2.5 If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Conditions 15.1.2.1 through 15.1.2.3, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and

the Federal, State or local law under which the risk was deemed unacceptable. (40 CFR Part 63 Subpart ZZZZ, Table 2c, footnote 1)

15.1.2.6 Sources have the option to utilize an oil analysis program as described in Condition 15.1.8 in order to extend the specified oil change requirement in Condition 15.1.2.1. (40 CFR Part 63 Subpart ZZZZ, Table 2c, footnote 2)

15.1.2.7 Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices. (40 CFR Part 63 Subpart ZZZZ, Table 2c, footnote 3)

What are my general requirements for complying with this subpart? (§ 63.6605)

15.1.3 You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times. (§ 63.6605(a))

15.1.4 At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (§ 63.6605(b))

What are my monitoring, installation, collection, operation, and maintenance requirements? (§ 63.6625)

15.1.5 If you own or operate an existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. (§ 63.6625(e)(2))

15.1.6 If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed. (§ 63.6625(f))

15.1.7 If you operate a new or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after

which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d of 40 CFR Part 63 Subpart ZZZZ apply. (§ 63.6625(h))

15.1.8 If you own or operate a stationary engine that is subject to the work, operation or management practices in Condition 15.1.2.1, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition 15.1.2.1. The oil analysis must be performed at the same frequency specified for changing the oil in Condition 15.1.2.1. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil before continuing to use the engine. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. (§ 63.6625(i))

How do I demonstrate continuous compliance with the emission limitations and operating limitations? (§ 63.6640)

15.1.9 If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements Conditions 15.1.9.1 through 15.1.9.3. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in Conditions 15.1.9.1 through 15.1.9.3, is prohibited. If you do not operate the engine according to the requirements in Conditions 15.1.9.1 through 15.1.9.3, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines. (§ 63.6640(f)(1))

15.1.9.1 There is no time limit on the use of emergency stationary RICE in emergency situations. (§ 63.6640(f)(1)(i))

15.1.9.2 You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100

hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. (§ 63.6640(f)(1)(ii))

15.1.9.3 You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph Condition 15.1.9.3, as long as the power provided by the financial arrangement is limited to emergency power. (§ 63.6640(f)(1)(iii))

What records must I keep? (§ 63.6655)

15.1.10 You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate an existing stationary emergency RICE. (§ 63.6655(e) and § 63.6655(e)(2))

15.1.11 If you own or operate an existing emergency stationary CI RICE with a site rating of less than or equal to 500 brake Hp located at major source of HAP emissions that does not meet the standards applicable to non-emergency engines, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the

notification of the emergency situation, and the time the engine was operated as part of demand response. (§ 63.6655(f) and § 63.6655(f)(1))

15.2 Sulfur Dioxide (SO_2) emissions shall not exceed 0.8 lbs/MMBtu (Colorado Regulation No. 1, Section VI.B.4.b.(i)). In the absence of credible evidence to the contrary, compliance with the SO_2 emission limitation shall be presumed since only diesel fuel is permitted to be used as fuel in this engine.

15.3 Opacity of emissions from the engine shall not exceed the following:

15.3.1 Except as provided for in Condition 15.3.2 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity (Colorado Regulation No. 1, Section II.A.1).

15.3.2 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from startup which is in excess of 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

Compliance with these limitations shall be monitored by conducting opacity observations in accordance with EPA Reference Method 9 as follows:

15.3.3 As specified in Conditions 15.1.2.4 and 15.1.7 engine startup shall not exceed 30 minutes. An engine startup period of less than 30 minutes shall not require an opacity observation to monitor compliance with the opacity limit in Condition 15.3.2. A record shall be kept of the date and time the engine started and when it was shutdown.

15.3.4 An opacity observation shall be conducted annually (calendar year period) to monitor compliance with the opacity limit in Condition 15.3.1. If the engine is operated more than 250 hours in any calendar year period, a second opacity observation shall be conducted. If two opacity readings are conducted in the annual (calendar year) period, such readings shall be conducted at least thirty days apart. Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

15.3.5 All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certificate shall be kept on site and made available to the Division upon request.

15.4 This engine is subject to the requirements in 40 CFR part 63 Subpart A "General Provisions", as adopted by reference in Colorado Regulation No. 8, Part E, Section I as specified in 40 CFR Part 63 Subpart ZZZZ § 63.6665. These requirements include, but are not limited to the following:

15.4.1 Prohibited activities in § 63.4(a).

15.4.2 Circumvention in § 63.4(b)

SECTION III - Acid Rain Requirements

1. Designated Representative and Alternate Designated Representative

Designated Representative:		Alternate Designated Representative:	
Name:	George Hess	Name:	Quinn Kilty
Title:	General Manager, Power Generation, CO	Title:	Manager, Air and Water Quality
Phone:	(303) 571-7282	Phone:	(294) 294-2165

2. Sulfur Dioxide Emission Allowances and Nitrogen Oxide Emission Limitations

Unit 1	2010	2011	2012	2013	2014	2015
SO_2 Allowances, per 40 CFR Part 73.10(b), Table 2	14327*	14327*	14327*	14327*	14327*	14327*
NO_X Limits, per 40 CFR Part 76.7	0.46 lbs/MMBtu	0.46 lbs/MMBtu	0.46 lbs/MMBtu	0.46 lbs/MMBtu	0.46 lbs/MMBtu	0.46 lbs/MMBtu

* Under the provisions of § 72.84(a) any allowance allocations to, transfers to and deductions from an affected unit=s Allowance Tracking System account is considered an automatic permit amendment and as such no revision to the permit is necessary. Numerical allowances shown in this table are from the 1996 edition of the CFR.

3. Standard Requirements

Unit 1 of this facility is subject to and the source has certified that they will comply with the following standard conditions.

Permit Requirements.

(1) The designated representative of each affected source and each affected unit at the source shall:
   (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
   (ii) Submit in a timely manner any supplemental information that the Division determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;

(2) The owners and operators of each affected source and each affected unit at the source shall:
   (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the Division; and
   (ii) Have an Acid Rain Permit.

Monitoring Requirements.

(1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.
(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Federal Clean Air Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements.

(1) The owners and operators of each source and each affected unit at the source shall:
    (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance account (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and
    (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Federal Clean Air Act.
(3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
    (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
    (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).
(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements.

(1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan to the Administrator of the U. S. EPA, as required under 40 CFR part 77.
(2) The owners and operators of an affected source that has excess emissions in any calendar year shall:

(i) Pay without demand, to the Administrator of the U. S. EPA, the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and

(ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or the Division:

(i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;

(ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply;

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

(iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability.

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Federal Clean Air Act.

(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Federal Clean Air Act and 18 U.S.C. 1001.

(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.

(4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.

(5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.

(6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.

(7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Federal Clean Air Act.

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

(1) Except as expressly provided in title IV of the Federal Clean Air Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Federal Clean Air Act, including the provisions of title I of the Federal Clean Air Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;

(2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Federal Clean Air Act;

(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;

(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

4. Reporting Requirements

Reports shall be submitted to the addresses identified in Appendix D.

Pursuant to 40 CFR Part 75.64 quarterly reports and compliance certification requirements shall be submitted to the Administrator **within 30 days after the end of the calendar quarter**. The contents of these reports shall meet the requirements of 40 CFR 75.64.

Pursuant to 40 CFR Part 75.65 excess emissions of opacity shall be reported to the Division. These reports shall be submitted in a format approved by the Division.

Revisions to this permit shall be made in accordance with 40 CFR Part 72, Subpart H, §§ 72.80 through 72.85 (as adopted by reference in Colorado Regulation 18). Permit modification requests shall be submitted to the Division at the address identified in Appendix D.

Changes to the Designated Representative or Alternate Designated Representative shall be made in accordance with 40 CFR 72.23.

SECTION IV - Permit Shield

Regulation No. 3, 5 CCR 1001-5, Part C, §§ I.A.4, V.D., & XIII.B and § 25-7-114.4(3)(a), C.R.S.

1. Specific Non-Applicable Requirements

Based on the information available to the Division and supplied by the applicant, the following parameters and requirements have been specifically identified as non-applicable to the facility to which this permit has been issued. This shield does not protect the source from any violations that occurred prior to or at the time of permit issuance. In addition, this shield does not protect the source from any violations that occur as a result of any modifications or reconstruction on which construction commenced prior to permit issuance.

Emission Unit Description & Number	Applicable Requirement	Justification
Cooling Tower	40 CFR Part 63, Subpart Q (as adopted by reference in Colorado Regulation No. 8, Part E)	These requirements are not applicable because the cooling towers do not use chromium-based water treatment chemicals.

2. General Conditions

Compliance with this Operating Permit shall be deemed compliance with all applicable requirements specifically identified in the permit and other requirements specifically identified in the permit as not applicable to the source. This permit shield shall not alter or affect the following:

2.1 The provisions of §§ 25-7-112 and 25-7-113, C.R.S., or § 303 of the federal act, concerning enforcement in cases of emergency;

2.2 The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

2.3 The applicable requirements of the federal Acid Rain Program, consistent with § 408(a) of the federal act;

2.4 The ability of the Air Pollution Control Division to obtain information from a source pursuant to § 25-7-111(2)(I), C.R.S., or the ability of the Administrator to obtain information pursuant to § 114 of the federal act;

2.5 The ability of the Air Pollution Control Division to reopen the Operating Permit for cause pursuant to Regulation No. 3, Part C, § XIII.

2.6 Sources are not shielded from terms and conditions that become applicable to the source subsequent to permit issuance.

3. Streamlined Conditions

The following applicable requirements have been subsumed within this operating permit using the pertinent streamlining procedures approved by the U.S. EPA. For purposes of the permit shield, compliance with the listed permit conditions will also serve as a compliance demonstration for purposes of the associated subsumed requirements.

Permit Condition(s)	Streamlined (Subsumed) Requirements
Section II, Conditions 9.1, 9.2, 9.3 & 9.4	Colorado Regulation No. 1, Sections IV.A & B [general continuous emission monitoring requirements]
Section V, Conditions 22.b & c	Colorado Regulation No. 1, Section IV. H [continuous emission monitoring requirements - maintaining a file of continuous emission monitoring records]
Section II, Condition 9.4.2	Colorado Regulation No. 1, Section IV. F [continuous emission monitoring requirements – calibration requirements]
Section II, Condition 9.5	Colorado Regulation No. 1, Section IV.G [continuous emission monitoring requirements - excess emission reporting requirements]
Section II, Condition 1.13	EPA PSD Permit, Condition III.a **opacity requirement ONLY** [opacity not to exceed 20% except for one 6-minute period per hour of not more than 27% average opacity]
Section II, Condition 1.1	40 CFR Part 60 Subpart D § 60.42(a), as adopted by reference in Colorado Regulation No. 6, Part A and EPA PSD Permit [particulate matter emissions shall not exceed 0.1 lbs/MMBtu]
Section II, Condition 1.3	40 CFR Part 60 Subpart D § 60.43(a)(2), as adopted by reference in Colorado Regulation No. 6, Part A and EPA PSD Permit [SO_2 emissions shall not exceed 1.2 lbs/MMBtu, when burning coal]
Section II, Conditions 9.1, 9.2, 9.3 & 9.4	40 CFR Part 60 Subpart D §§ 60.45(a), (c) and EPA PSD Permit **EXCEPT (c)(3) as it applies to COMS**, (e) and (f) as adopted by reference in Colorado Regulation No. 6, Part A [continuous emission monitoring requirements]
Section II, Condition 9.5	40 CFR Part 60 Subpart D § 60.45(g) and EPA PSD Permit, **EXCEPT (g)(3) as it applies to identifying NO_X excess emissions**, as adopted by reference in Colorado Regulation No. 6, Part A [excess emission reporting requirements]
Section II, Condition 1.15.1	Colorado Regulation No. 3, Part F, Section VII.E [ONLY the paragraph related to submittal of semi-annual reports for any excursions under CAM]

SECTION V - General Permit Conditions

11/16/10 version

1. Administrative Changes

Regulation No. 3, 5 CCR 1001-5, Part A, § III.

The permittee shall submit an application for an administrative permit amendment to the Division for those permit changes that are described in Regulation No. 3, Part A, § I.B.1. The permittee may immediately make the change upon submission of the application to the Division.

2. Certification Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.9., V.C.16.a.& e. and V.C.17.

a. Any application, report, document and compliance certification submitted to the Air Pollution Control Division pursuant to Regulation No. 3 or the Operating Permit shall contain a certification by a responsible official of the truth, accuracy and completeness of such form, report or certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

b. All compliance certifications for terms and conditions in the Operating Permit shall be submitted to the Air Pollution Control Division at least annually unless a more frequent period is specified in the applicable requirement or by the Division in the Operating Permit.

c. Compliance certifications shall contain:

(i) the identification of each permit term and condition that is the basis of the certification;

(ii) the compliance status of the source;

(iii) whether compliance was continuous or intermittent;

(iv) method(s) used for determining the compliance status of the source, currently and over the reporting period; and

(v) such other facts as the Air Pollution Control Division may require to determine the compliance status of the source.

d. All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

e. If the permittee is required to develop and register a risk management plan pursuant to § 112(r) of the federal act, the permittee shall certify its compliance with that requirement; the Operating Permit shall not incorporate the contents of the risk management plan as a permit term or condition.

3. Common Provisions

Common Provisions Regulation, 5 CCR 1001-2 §§ II.A., II.B., II.C., II,.E., II.F., II.I, and II.J

a. To Control Emissions Leaving Colorado

When emissions generated from sources in Colorado cross the State boundary line, such emissions shall not cause the air quality standards of the receiving State to be exceeded, provided reciprocal action is taken by the receiving State.

b. Emission Monitoring Requirements

The Division may require owners or operators of stationary air pollution sources to install, maintain, and use instrumentation to monitor and record emission data as a basis for periodic reports to the Division.

c. Performance Testing

The owner or operator of any air pollution source shall, upon request of the Division, conduct performance test(s) and furnish the Division a written report of the results of such test(s) in order to determine compliance with applicable emission control regulations.

Performance test(s) shall be conducted and the data reduced in accordance with the applicable reference test methods unless the Division:

(i) specifies or approves, in specific cases, the use of a test method with minor changes in methodology;

(ii) approves the use of an equivalent method;

(iii) approves the use of an alternative method the results of which the Division has determined to be adequate for indicating where a specific source is in compliance; or

(iv) waives the requirement for performance test(s) because the owner or operator of a source has demonstrated by other means to the Division's satisfaction that the affected facility is in compliance with the standard. Nothing in this paragraph shall be construed to abrogate the Commission's or Division's authority to require testing under the Colorado Revised Statutes, Title 25, Article 7, and pursuant to regulations promulgated by the Commission.

Compliance test(s) shall be conducted under such conditions as the Division shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Division such records as may be necessary to determine the conditions of the performance test(s). Operations during period of startup, shutdown, and malfunction shall not constitute representative conditions of performance test(s) unless otherwise specified in the applicable standard.

The owner or operator of an affected facility shall provide the Division thirty days prior notice of the performance test to afford the Division the opportunity to have an observer present. The Division may waive the thirty day notice requirement provided that arrangements satisfactory to the Division are made for earlier testing.

The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for test methods applicable to such facility;

(ii) Safe sampling platform(s);

(iii) Safe access to sampling platform(s); and

(iv) Utilities for sampling and testing equipment.

Each performance test shall consist of at least three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of results of at least three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other

circumstances beyond the owner or operator's control, compliance may, upon the Division's approval, be determined using the arithmetic mean of the results of the two other runs.

Nothing in this section shall abrogate the Division's authority to conduct its own performance test(s) if so warranted.

d. Affirmative Defense Provision for Excess Emissions during Malfunctions

Note that until such time as the U.S. EPA approves this provision into the Colorado State Implementation Plan (SIP), it shall be enforceable only by the State.

An affirmative defense to a claim of violation under these regulations is provided to owners and operators for civil penalty actions for excess emissions during periods of malfunction. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of evidence that:

(i) The excess emissions were caused by a sudden, unavoidable breakdown of equipment, or a sudden, unavoidable failure of a process to operate in the normal or usual manner, beyond the reasonable control of the owner or operator;

(ii) The excess emissions did not stem from any activity or event that could have reasonably been foreseen and avoided, or planned for, and could not have been avoided by better operation and maintenance practices;

(iii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded;

(iv) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

(v) All reasonably possible steps were taken to minimize the impact of the excess emissions on ambient air quality;

(vi) All emissions monitoring systems were kept in operation (if at all possible);

(vii) The owner or operator’s actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence;

(viii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

(ix) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This section is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement; and

(x) During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in the Commissions’ Regulations that could be attributed to the emitting source.

The owner or operator of the facility experiencing excess emissions during a malfunction shall notify the division verbally as soon as possible, but no later than noon of the Division’s next working day, and shall submit written notification following the initial occurrence of the excess emissions by the end of the source’s next reporting period. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to failures to meet federally promulgated performance standards or emission limits, including, but not limited to, new source performance standards and national emission standards

for hazardous air pollutants. The affirmative defense provision does not apply to state implementation plan (sip) limits or permit limits that have been set taking into account potential emissions during malfunctions, including, but not necessarily limited to, certain limits with 30-day or longer averaging times, limits that indicate they apply during malfunctions, and limits that indicate they apply at all times or without exception.

e. Circumvention Clause

A person shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of air pollutants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of this regulation. No person shall circumvent this regulation by using more openings than is considered normal practice by the industry or activity in question.

f. Compliance Certifications

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in the Colorado State Implementation Plan, nothing in the Colorado State Implementation Plan shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. Evidence that has the effect of making any relevant standard or permit term more stringent shall not be credible for proving a violation of the standard or permit term.

When compliance or non-compliance is demonstrated by a test or procedure provided by permit or other applicable requirement, the owner or operator shall be presumed to be in compliance or non-compliance unless other relevant credible evidence overcomes that presumption.

g. Affirmative Defense Provision for Excess Emissions During Startup and Shutdown

An affirmative defense is provided to owners and operators for civil penalty actions for excess emissions during periods of startup and shutdown. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of the evidence that:

(i) The periods of excess emissions that occurred during startup and shutdown were short and infrequent and could not have been prevented through careful planning and design;

(ii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance;

(iii) If the excess emissions were caused by a bypass (an intentional diversion of control equipment), then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(iv) The frequency and duration of operation in startup and shutdown periods were minimized to the maximum extent practicable;

(v) All possible steps were taken to minimize the impact of excess emissions on ambient air quality;

(vi) All emissions monitoring systems were kept in operation (if at all possible);

(vii) The owner or operator’s actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence; and,

(viii) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This subparagraph is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement.

The owner or operator of the facility experiencing excess emissions during startup and shutdown shall notify the Division verbally as soon as possible, but no later than two (2) hours after the start of the next working day, and shall submit written quarterly notification following the initial occurrence of the excess emissions. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to State Implementation Plan provisions or other requirements that derive from new source performance standards or national emissions standards for hazardous air pollutants, or any other federally enforceable performance standard or emission limit with an averaging time greater than twenty-four hours. In addition, an affirmative defense cannot be used by a single source or small group of sources where the excess emissions have the potential to cause an exceedance of the ambient air quality standards or Prevention of Significant Deterioration (PSD) increments.

In making any determination whether a source established an affirmative defense, the Division shall consider the information within the notification required above and any other information the Division deems necessary, which may include, but is not limited to, physical inspection of the facility and review of documentation pertaining to the maintenance and operation of process and air pollution control equipment.

4. Compliance Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.C.9., V.C.11. & 16.d. and § 25-7-122.1(2), C.R.S.

a. The permittee must comply with all conditions of the Operating Permit. Any permit noncompliance relating to federally-enforceable terms or conditions constitutes a violation of the federal act, as well as the state act and Regulation No. 3. Any permit noncompliance relating to state-only terms or conditions constitutes a violation of the state act and Regulation No. 3, shall be enforceable pursuant to state law, and shall not be enforceable by citizens under § 304 of the federal act. Any such violation of the federal act, the state act or regulations implementing either statute is grounds for enforcement action, for permit termination, revocation and reissuance or modification or for denial of a permit renewal application.

b. It shall not be a defense for a permittee in an enforcement action or a consideration in favor of a permittee in a permit termination, revocation or modification action or action denying a permit renewal application that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

c. The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of any request by the permittee for a permit modification, revocation and reissuance, or termination, or any notification of planned changes or anticipated noncompliance does not stay any permit condition, except as provided in §§ X. and XI. of Regulation No. 3, Part C.

d. The permittee shall furnish to the Air Pollution Control Division, within a reasonable time as specified by the Division, any information that the Division may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Division copies of records required to be kept by the permittee, including information claimed to be confidential. Any information subject to a claim of confidentiality shall be specifically identified and submitted separately from information not subject to the claim.

e. Any schedule for compliance for applicable requirements with which the source is not in compliance at the time of permit issuance shall be supplemental, and shall not sanction noncompliance with, the applicable requirements on which it is based.

f. For any compliance schedule for applicable requirements with which the source is not in compliance at the time of permit issuance, the permittee shall submit, at least every 6 months unless a more frequent period is specified in the applicable requirement or by the Air Pollution Control Division, progress reports which contain the following:

(i) dates for achieving the activities, milestones, or compliance required in the schedule for compliance, and dates when such activities, milestones, or compliance were achieved; and

(ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

g. The permittee shall not knowingly falsify, tamper with, or render inaccurate any monitoring device or method required to be maintained or followed under the terms and conditions of the Operating Permit.

5. Emergency Provisions

Regulation No. 3, 5 CCR 1001-5, Part C, § VII.

An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed the technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. "Emergency" does not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. An emergency constitutes an affirmative defense to an enforcement action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. an emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. the permitted facility was at the time being properly operated;

c. during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. the permittee submitted oral notice of the emergency to the Air Pollution Control Division no later than noon of the next working day following the emergency, and followed by written notice within one month of the time when emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

This emergency provision is in addition to any emergency or malfunction provision contained in any applicable

6. Emission Controls for Asbestos

Regulation No. 8, 5 CCR 1001-10, Part B

The permittee shall not conduct any asbestos abatement activities except in accordance with the provisions of Regulation No. 8, Part B, " asbestos control."

7. Emissions Trading, Marketable Permits, Economic Incentives

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.13.

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are specifically provided for in the permit.

8. Fee Payment

C.R.S. §§ 25-7-114.1(6) and 25-7-114.7

a. The permittee shall pay an annual emissions fee in accordance with the provisions of § 25-7-114.7. A 1% per month late payment fee shall be assessed against any invoice amounts not paid in full on the 91st day after the date of invoice, unless a permittee has filed a timely protest to the invoice amount.

b. The permittee shall pay a permit processing fee in accordance with the provisions of C.R.S § 25-7-114.7. If the Division estimates that processing of the permit will take more than 30 hours, it will notify the permittee of its estimate of what the actual charges may be prior to commencing any work exceeding the 30 hour limit.

c. The permittee shall pay an APEN fee in accordance with the provisions of § 25-7-114.1(6) for each APEN or revised APEN filed.

9. Fugitive Particulate Emissions

Regulation No. 1, 5 CCR 1001-3, § III.D.1.

The permittee shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere, in accordance with the provisions of Regulation No. 1, § III.D.1.

10. Inspection and Entry

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.16.b.

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Air Pollution Control Division, or any authorized representative, to perform the following:

a. enter upon the permittee's premises where an Operating Permit source is located, or emissions-related activity is conducted, or where records must be kept under the terms of the permit;

b. have access to, and copy, at reasonable times, any records that must be kept under the conditions of the permit;

c. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the Operating Permit;

d. sample or monitor at reasonable times, for the purposes of assuring compliance with the Operating Permit or applicable requirements, any substances or parameters.

11. Minor Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, §§ X. & XI.

The permittee shall submit an application for a minor permit modification before making the change requested in the application. The permit shield shall not extend to minor permit modifications.

12. New Source Review

Regulation No. 3, 5 CCR 1001-5, Part B

The permittee shall not commence construction or modification of a source required to be reviewed under the New Source Review provisions of Regulation No. 3, Part B, without first receiving a construction permit.

13. No Property Rights Conveyed

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.11.d.

This permit does not convey any property rights of any sort, or any exclusive privilege.

14. Odor

Regulation No. 2, 5 CCR 1001-4, Part A

As a matter of state law only, the permittee shall comply with the provisions of Regulation No. 2 concerning odorous emissions.

15. Off-Permit Changes to the Source

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.B.

The permittee shall record any off-permit change to the source that causes the emissions of a regulated pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from the change, including any other data necessary to show compliance with applicable ambient air quality standards. The permittee shall provide contemporaneous notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit . The permit shield shall not apply to any off-permit change.

16. Opacity

Regulation No. 1, 5 CCR 1001-3, §§ I., II.

The permittee shall comply with the opacity emissions limitation set forth in Regulation No. 1, §§ I.-II.

17. Open Burning

Regulation No. 9, 5 CCR 1001-11

The permittee shall obtain a permit from the Division for any regulated open burning activities in accordance with provisions of Regulation No .9.

18. Ozone Depleting Compounds

Regulation No. 15, 5 CCR 1001-17

The permittee shall comply with the provisions of Regulation No. 15 concerning emissions of ozone depleting compounds. Sections I., II.C., II.D., III. IV., and V. of Regulation No. 15 shall be enforced as a matter of state law only.

19. Permit Expiration and Renewal

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.6., IV.C., V.C.2.

a. The permit term shall be five (5) years. The permit shall expire at the end of its term. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted.

b. Applications for renewal shall be submitted at least twelve months, but not more than 18 months, prior to the expiration of the Operating Permit. An application for permit renewal may address only those portions of the permit that require revision, supplementing, or deletion, incorporating the remaining permit terms by reference from the previous permit. A copy of any materials incorporated by reference must be included with the application.

20. Portable Sources

Regulation No. 3, 5 CCR 1001-5, Part C, § II.D.

Portable Source permittees shall notify the Air Pollution Control Division at least 10 days in advance of each change in location.

21. Prompt Deviation Reporting

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.7.b.

The permittee shall promptly report any deviation from permit requirements, including those attributable to malfunction conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken.

"Prompt" is defined as follows:

a. Any definition of "prompt" or a specific timeframe for reporting deviations provided in an underlying applicable requirement as identified in this permit; or

b. Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations will be submitted based on the following schedule:

(i) For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in the applicable regulation) that continue for more than an hour in excess of permit requirements, the report shall be made within 24 hours of the occurrence;

(ii) For emissions of any regulated air pollutant, excluding a hazardous air pollutant or a toxic air pollutant that continue for more than two hours in excess of permit requirements, the report shall be made within 48 hours; and

(iii) For all other deviations from permit requirements, the report shall be submitted every six (6) months, except as otherwise specified by the Division in the permit in accordance with paragraph 22.d. below.

c. If any of the conditions in paragraphs b.i or b.ii above are met, the source shall notify the Division by telephone (303-692-3155) or facsimile (303-782-0278) based on the timetables listed above. *[Explanatory note: Notification by telephone or facsimile must specify that this notification is a deviation report for an Operating Permit.]* A written notice, certified consistent with General Condition 2.a. above (Certification Requirements), shall be submitted within 10 working days of the occurrence. All deviations reported under this section shall also be identified in the 6-month report required above.

"Prompt reporting" does not constitute an exception to the requirements of "Emergency Provisions" for the purpose of avoiding enforcement actions.

22. Record Keeping and Reporting Requirements

Regulation No. 3, 5 CCR 1001-5, Part A, § II.; Part C, §§ V.C.6., V.C.7.

a. Unless otherwise provided in the source specific conditions of this Operating Permit, the permittee shall maintain compliance monitoring records that include the following information:

(i) date, place as defined in the Operating Permit, and time of sampling or measurements;

(ii) date(s) on which analyses were performed;

(iii) the company or entity that performed the analysis;

(iv) the analytical techniques or methods used;

(v) the results of such analysis; and

(vi) the operating conditions at the time of sampling or measurement.

b. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application. Support information, for this purpose, includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Operating Permit. With prior approval of the Air Pollution Control Division, the permittee may maintain any of the above records in a computerized form.

c. Permittees must retain records of all required monitoring data and support information for the most recent twelve (12) month period, as well as compliance certifications for the past five (5) years on-site at all times. A permittee shall make available for the Air Pollution Control Division's review all other records of required monitoring data and support information required to be retained by the permittee upon 48 hours advance notice by the Division.

d. The permittee shall submit to the Air Pollution Control Division all reports of any required monitoring at least every six (6) months, unless an applicable requirement, the compliance assurance monitoring rule, or the Division requires submission on a more frequent basis. All instances of deviations from any permit requirements must be clearly identified in such reports.

e. The permittee shall file an Air Pollutant Emissions Notice ("APEN") prior to constructing, modifying, or altering any facility, process, activity which constitutes a stationary source from which air pollutants are or are to be emitted, unless such source is exempt from the APEN filing requirements of Regulation No. 3, Part A, § II.D. A revised APEN shall be filed annually whenever a significant change in emissions, as defined in Regulation No. 3, Part A, § II.C.2., occurs; whenever there is a change in owner or operator of any facility, process, or activity; whenever new control equipment is installed; whenever a different type of control equipment replaces an existing type of control equipment; whenever a permit limitation must be modified; or before the APEN expires. An APEN is valid for a period of five years. The five-year period recommences when a revised APEN is received by the Air Pollution Control Division. Revised APENs shall be submitted no later than 30 days before the five-year term expires. Permittees submitting revised APENs to inform the Division of a change in actual emission rates must do so by April 30 of the following year. Where a permit revision is required, the revised APEN must be filed along with a request for permit revision. APENs for changes in control equipment must be submitted before the change occurs. Annual fees are based on the most recent APEN on file with the Division.

23. Reopenings for Cause

Regulation No. 3, 5 CCR 1001-5, Part C, § XIII.

a. The Air Pollution Control Division shall reopen, revise, and reissue Operating Permits; permit reopenings and reissuance shall be processed using the procedures set forth in Regulation No. 3, Part C, § III., except that proceedings to reopen and reissue permits affect only those parts of the permit for which cause to reopen exists.

b. The Division shall reopen a permit whenever additional applicable requirements become applicable to a major source with a remaining permit term of three or more years, unless the effective date of the requirements is later than the date on which the permit expires, or unless a general permit is obtained to address the new requirements; whenever additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program; whenever the Division determines the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or whenever the Division determines that the permit must be revised or revoked to assure compliance with an applicable requirement.

c. The Division shall provide 30 days' advance notice to the permittee of its intent to reopen the permit, except that a shorter notice may be provided in the case of an emergency.

d. The permit shield shall extend to those parts of the permit that have been changed pursuant to the reopening and reissuance procedure.

24. Section 502(b)(10) Changes

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.A.

The permittee shall provide a minimum 7-day advance notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit. The permittee shall attach a copy of each such notice given to its Operating Permit.

25. Severability Clause

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.10.

In the event of a challenge to any portion of the permit, all emissions limits, specific and general conditions, monitoring, record keeping and reporting requirements of the permit, except those being challenged, remain valid and enforceable.

26. Significant Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, § III.B.2.

The permittee shall not make a significant modification required to be reviewed under Regulation No. 3, Part B ("Construction Permit" requirements) without first receiving a construction permit. The permittee shall submit a complete Operating Permit application or application for an Operating Permit revision for any new or modified source within twelve months of commencing operation, to the address listed in Item 1 in Appendix D of this permit. If the permittee chooses to use the "Combined Construction/Operating Permit" application procedures of Regulation No. 3, Part C, then the Operating Permit must be received prior to commencing construction of the new or modified source.

27. Special Provisions Concerning the Acid Rain Program

Regulation No. 3, 5 CCR 1001-5, Part C, §§ V.C.1.b. & 8

a. Where an applicable requirement of the federal act is more stringent than an applicable requirement of regulations promulgated under Title IV of the federal act, 40 Code of Federal Regulations (CFR) Part 72, both provisions shall be incorporated into the permit and shall be federally enforceable.

b. Emissions exceeding any allowances that the source lawfully holds under Title IV of the federal act or the regulations promulgated thereunder, 40 CFR Part 72, are expressly prohibited.

28. Transfer or Assignment of Ownership

Regulation No. 3, 5 CCR 1001-5, Part C, § II.C.

No transfer or assignment of ownership of the Operating Permit source will be effective unless the prospective owner or operator applies to the Air Pollution Control Division on Division-supplied Administrative Permit Amendment forms, for reissuance of the existing Operating Permit. No administrative permit shall be complete until a written agreement containing a specific date for transfer of permit, responsibility, coverage, and liability between the permittee and the prospective owner or operator has been submitted to the Division.

29. Volatile Organic Compounds

Regulation No. 7, 5 CCR 1001-9, §§ III & V.

The requirements in paragraphs a, b and e apply to sources located in an ozone non-attainment area or the Denver 1-hour ozone attainment/maintenance area. The requirements in paragraphs c and d apply statewide.

a. All storage tank gauging devices, anti-rotation devices, accesses, seals, hatches, roof drainage systems, support structures, and pressure relief valves shall be maintained and operated to prevent detectable vapor loss except when opened, actuated, or used for necessary and proper activities (e.g. maintenance). Such opening, actuation, or use shall be limited so as to minimize vapor loss.

   Detectable vapor loss shall be determined visually, by touch, by presence of odor, or using a portable hydrocarbon analyzer. When an analyzer is used, detectable vapor loss means a VOC concentration exceeding 10,000 ppm. Testing shall be conducted as in Regulation No. 7, Section VIII.C.3.

b. Except when otherwise provided by Regulation No. 7, all volatile organic compounds, excluding petroleum liquids, transferred to any tank, container, or vehicle compartment with a capacity exceeding 212 liters (56 gallons), shall be transferred using submerged or bottom filling equipment. For top loading, the fill tube shall reach within six inches of the bottom of the tank compartment. For bottom-fill operations, the inlet shall be flush with the tank bottom.

c. The permittee shall not dispose of volatile organic compounds by evaporation or spillage unless Reasonably Available Control Technology (RACT) is utilized.

d. No owner or operator of a bulk gasoline terminal, bulk gasoline plant, or gasoline dispensing facility as defined in Colorado Regulation No. 7, Section VI, shall permit gasoline to be intentionally spilled, discarded in sewers, stored in open containers, or disposed of in any other manner that would result in evaporation.

e. Beer production and associated beer container storage and transfer operations involving volatile organic compounds with a true vapor pressure of less than 1.5 PSIA actual conditions are exempt from the provisions of paragraph b, above.

30. Wood Stoves and Wood burning Appliances

Regulation No. 4, 5 CCR 1001-6

The permittee shall comply with the provisions of Regulation No. 4 concerning the advertisement, sale, installation, and use of wood stoves and wood burning appliances.

OPERATING PERMIT APPENDICES

A - INSPECTION INFORMATION
B – MONITORING AND PERMIT DEVIATION REPORT
C - COMPLIANCE CERTIFICATION REPORT
D - NOTIFICATION ADDRESSES
E - PERMIT ACRONYMS
F - PERMIT MODIFICATIONS
G - EMISSION FACTORS FOR SOURCES OF FUGITIVE PARTICULATE MATTER EMISSIONS
H – COMPLIANCE ASSURANCE MONITORING PLAN
I - MERCURY (HG) MONITORING PLAN

*DISCLAIMER:

None of the information found in these Appendices shall be considered to be State or Federally enforceable, except as otherwise provided in the permit, and is presented to assist the source, permitting authority, inspectors, and citizens.

APPENDIX A - Inspection Information

Directions to Plant:

This facility is located at 14940 County Road 24.

Safety Equipment Required:

Eye Protection
Hard Hat
Safety Shoes
Hearing Protection
Respirator (required in some areas)

Facility Plot Plan:

Figure 1 (following page) shows the plot plan as submitted on February 15, 1996 with the source's Title V Operating Permit Application.

List of Insignificant Activities:

The following list of insignificant activities was provided by the source to assist in the understanding of the facility layout. Since there is no requirement to update such a list, activities may have changed since the last filing.

<u>Units with emissions less than APEN de minimis - criteria pollutants (Reg 3 Part C.II.E.3.a)</u>

Boiler Steam Vents – emit VOC from injection of VOCs as treatment chemicals (< 1 ton/yr VOC)
Solvent Cold Cleaners (< 1 ton/yr of VOC from each unit)
Lime storage silo for water treatment process (< 1 ton of PM/PM_{10})

<u>In-house experimental and analytical laboratory equipment (Reg 3 Part C.II.E.3.i)</u>

Plant Laboratory

<u>Fuel (gaseous) burning equipment < 5 MMBtu/hr (Reg 3 Part C.II.E.3.k)</u>

Propane Portable Heaters

<u>Welding, soldering and brazing operations using no lead-based compounds (Reg 3 Part C.II.E.3.r)</u>

Maintenance Welding Machine

Chemical storage tanks or containers < 500 gal (Reg 3 Part C.II.E.3.n)

Cooling Tower Scale Inhibitor Day Tank (50 gal inside water treatment bldg)
High Pressure Treated Water Chemical Feed Tank (500 gal treated water pond)
R. O. Acid Feed Tank (50 gal inside water treatment bldg)
R. O. Anti-Scalant Feed Tank (50 gal inside water treatment bldg)
R. O. Sodium Bisulfite Feed Tank (50 gal inside water treatment bldg)
R. O. Caustic Feed Tank (50 gal inside water treatment bldg)
Building Cooling Water Head Tank (500 gal inside main plant)
Oxygen Scavenger Chemical Feed Tank (50 gal inside main plant)
Phosphate Chemical Feed Tank (50 gal inside main plant)
Amine Chemical Feed Tank (50 gal inside main plant)
Ash Water Chemical Feed Tank (265 gal inside main plant)
Auxiliary Boiler Chemical Feed Tank (50 gal inside main plant)
Bleach Feedwater Tank (100 gal inside water treatment bldg)
Sewage Bleach Feed Tank (75 gal inside sewage treatment bldg)

Battery recharging areas (Reg 3 Part C.II.E.3.t)

Battery Storage Area

Landscaping and site housekeeping devices < 10 hp (Reg 3 Part C.II.E.3.bb)

Mowers, Snowblowers, Etc.

Fugitive emissions from landscaping activities (Reg 3 Part C.II.E.3.cc)

Operations involving acetylene, butane, propane or other flame cutting torches (Reg 3 Part C.II.E.3.kk)

Portable Welding Torches

Chemical storage areas < 5,000 gal capacity (Reg 3 Part C.II.E.3.mm)

Oil Drum Storage Areas
Warehouse
Water Treatment Buildings

Emissions of air pollutants which are not criteria or non-criteria reportable pollutants (Reg 3 Part C.II.E.3.oo)

Wastewater Operations
Evaporation Ponds (east and south sides of facility)
Holding Ponds (east and south sides of facility)

Raw Water Storage Reservoir (north side of facility)
Treated Water Pond (west of water treatment bldg)

Janitorial activities and products (Reg 3 Part C.II.E.3.pp)

Office emissions including cleaning, copying, and restrooms (Reg 3 Part C.II.E.3.tt)

Fuel storage and dispensing equipment in ozone attainment areas throughput < 400 gal/day averaged over 30 days (Reg 3 Part C.II.E.3.ccc)

Gasoline Tank, Unleaded (1,000 gal underground)
Gasoline Tank, Unleaded (1,000 gal underground)

Storage tanks with annual throughput less than 400,000 gal/yr and meeting content specifications (Reg 3 Part C.II.E.3.fff)

Fuel Oil Spill Tank (19,750 gal underground)
Emergency Oil Spill Drain Tank (12,530 gal underground)
Diesel Tank (10,000 gal above ground)
Diesel Tank (10,000 gal underground)
Diesel Fuel Tank for Emergency Generator (550 gal above ground)
Fire Pump Diesel Day Tank (200 gal above ground)
Turbine Lube Oil Batch Tank A (12,000 gal above ground)
Turbine Lube Oil Batch Tank B (12,000 gal above ground)
Hydrogen Seal Oil Tank (350 gal above ground)

Emergency Power Generators - limited hours or size (Reg 3 Part C.II.E.3.nnn.(iii))

Emergency Diesel Generator (runs < 100 hrs/yr)

Sandblast equipment where blast media is recycled and blasted material is collected (Reg 3 Part C.II.E.3.www)

Sandblasting Machine

Non-Road Engines

Joy Air Compressor (< 175 hp and runs < 1,450 hrs/yr)
Portable Light Generator (< 175 hp and runs < 1,450 hrs/yr)
Two (2) Water Pumps (< 175 hp and runs < 1,450 hrs/yr)
Sullair Air Compressor (< 175 hp and runs < 1,450 hrs/yr)
Four (4) Portable Welders (< 175 hp and runs < 1,450 hrs/yr)

Not sources of emissions

Turbine Lube Oil System (closed system)
Waste Water Neutralization Tank (30,000 gal underground)
R. O. Product Storage Tank (10,000 gal inside water treatment bldg)
Sludge Thickener Supernatant Tank (8,000 gal inside water treatment bldg)
Acid Storage Tank A (15,000 gal inside water treatment bldg)
Waste Water Conc. Product Storage Tank (60,000 gal above ground)
Condensate Storage A (150,000 gal above ground)
Condensate Storage B (150,000 gal above ground)
Potable Water Storage Tank (6,000 gal inside main plant)
Soot Blower Water Deslagger Supply Tank (12,000 gal inside main plant)
Acid Stabilization Tank (24,000 gal above ground)
Chem Lab D.I. Water Storage Tank (300 gal inside main plant)
Waste Tank (2,500 gal inside waste water concentrator bldg)
Seed Tank (600 gal inside waste water concentrator bldg)
Primary Feed Tank (4,500 gal inside waste water concentrator bldg)
Cooling Tower Scale Inhibitor Storage (4,000 gal inside water treatment bldg)
Caustic Storage Tank A (15,000 gal inside water treatment bldg)
Alum Storage Tank (12,000 gal inside water treatment bldg)
Main Plant Heat Head Tank (3,300 gal inside main plant)
Sludge Thickener Tank (940,000 gal N of water treatment)
Clarifier/Softener Tank (715,000 gal N of water treatment)
Feed Tank (4,500 gal inside waste water concentrator bldg)
Brine Tank (16,000 gal W of water treatment bldg)
Bleach Tank (16,000 gal W of water treatment bldg)
Tolyltriazole Tank (1,000 gal in main plant bldg)
Scale Inhibitor Tank (1,000 gal in main plant bldg)

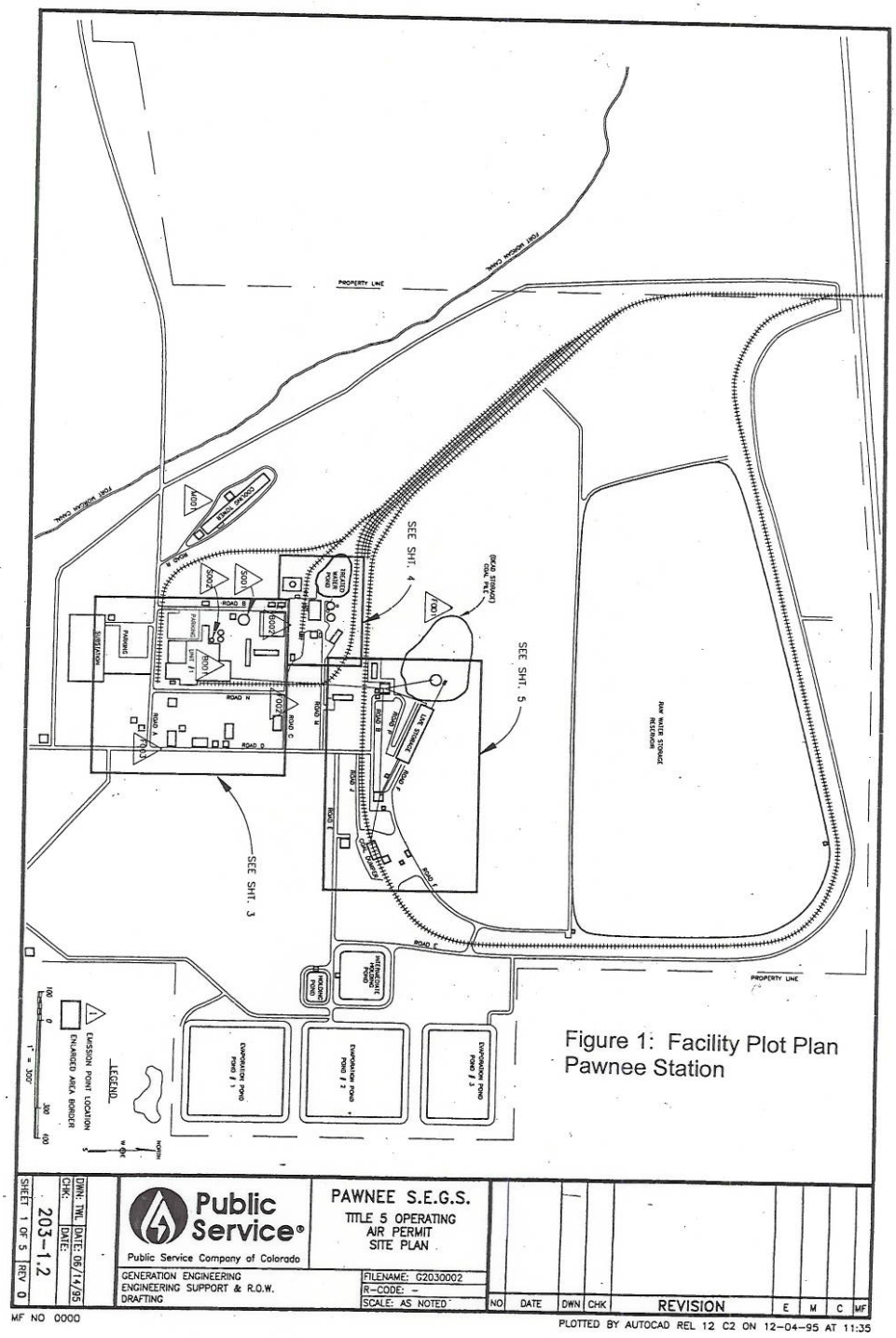

Figure 1: Facility Plot Plan
Pawnee Station

APPENDIX B

Reporting Requirements and Definitions

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Please note that, pursuant to 113(c)(2) of the federal Clean Air Act, any person who knowingly:

(A) makes any false material statement, representation, or certification in, or omits material information from, or knowingly alters, conceals, or fails to file or maintain any notice, application, record, report, plan, or other document required pursuant to the Act to be either filed or maintained (whether with respect to the requirements imposed by the Administrator or by a State);

(B) fails to notify or report as required under the Act; or

(C) falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required to be maintained or followed under the Act shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than 2 years, or both. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

The permittee must comply with all conditions of this operating permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

The Part 70 Operating Permit program requires three types of reports to be filed for all permits.
All required reports must be certified by a responsible official.

Report #1: Monitoring Deviation Report (due at least every six months)

For purposes of this operating permit, the Division is requiring that the monitoring reports are due every six months unless otherwise noted in the permit. All instances of deviations from permit monitoring requirements must be clearly identified in such reports.

For purposes of this operating permit, monitoring means any condition determined by observation, by data from any monitoring protocol, or by any other monitoring which is required by the permit as well as the recordkeeping associated with that monitoring. This would include, for example, fuel use or process rate monitoring, fuel analyses, and operational or control device parameter monitoring.

Report #2: Permit Deviation Report (must be reported "promptly")

In addition to the monitoring requirements set forth in the permits as discussed above, each and every requirement of the permit is subject to deviation reporting. The reports must address deviations from permit

requirements, including those attributable to upset conditions and malfunctions as defined in this Appendix, the probable cause of such deviations, and any corrective actions or preventive measures taken. All deviations from any term or condition of the permit are required to be summarized or referenced in the annual compliance certification.

For purposes of this operating permit, "malfunction" shall refer to both emergency conditions and malfunctions. Additional discussion on these conditions is provided later in this Appendix.

For purposes of this operating permit, the Division is requiring that the permit deviation reports are due as set forth in General Condition 21. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. For example, quarterly Excess Emission Reports required by an NSPS or Regulation No. 1, Section IV.

In addition to the monitoring deviations discussed above, included in the meaning of deviation for the purposes of this operating permit are any of the following:

(1) A situation where emissions exceed an emission limitation or standard contained in the permit;

(2) A situation where process or control device parameter values demonstrate that an emission limitation or standard contained in the permit has not been met;

(3) A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit; or,

(4) A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only if the emission point is subject to CAM)

For reporting purposes, the Division has combined the Monitoring Deviation Report with the Permit Deviation Report.

Report #3: Compliance Certification (annually, as defined in the permit)

Submission of compliance certifications with terms and conditions in the permit, including emission limitations, standards, or work practices, is required not less than annually.

Compliance Certifications are intended to state the compliance status of each requirement of the permit over the certification period. They must be based, at a minimum, on the testing and monitoring methods specified in the permit that were conducted during the relevant time period. In addition, if the owner or operator knows of other material information (i.e. information beyond required monitoring that has been specifically assessed in relation to how the information potentially affects compliance status), that information must be identified and addressed in the compliance certification. The compliance certification must include the following:

- The identification of each term or condition of the permit that is the basis of the certification;

- Whether or not the method(s) used by the owner or operator for determining the compliance status with each permit term and condition during the certification period was the method(s) specified in the permit. Such methods and other means shall include, at a minimum, the methods and means required in the permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Clean Air Act, which prohibits knowingly making a false certification or omitting material information;

- The status of compliance with the terms and conditions of the permit, and whether compliance was continuous or intermittent. The certification shall identify each deviation and take it into account in the compliance certification. Note that not all deviations are considered violations.[1]

- Such other facts as the Division may require, consistent with the applicable requirements to which the source is subject, to determine the compliance status of the source.

The Certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only for emission points subject to CAM)

Note the requirement that the certification shall identify each deviation and take it into account in the compliance certification. Previously submitted deviation reports, including the deviation report submitted at the time of the annual certification, may be referenced in the compliance certification.

Startup, Shutdown, Malfunctions and Emergencies

Understanding the application of Startup, Shutdown, Malfunctions and Emergency Provisions, is very important in both the deviation reports and the annual compliance certifications.

Startup, Shutdown, and Malfunctions

Please note that exceedances of some New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) standards that occur during Startup, Shutdown or Malfunctions may not be considered to be non-compliance since emission limits or standards often do not apply unless specifically stated in the NSPS. Such exceedances must, however, be reported as excess emissions per the NSPS/MACT rules and would still be noted in the deviation report. In regard to compliance certifications, the permittee should be confident of the information related to those deviations when making compliance determinations since they are subject to Division review. The concepts of Startup, Shutdown and Malfunctions also exist for Best Available Control Technology (BACT) sources, but are not applied in the same fashion as for NSPS and MACT sources.

Emergency Provisions

[1] For example, given the various emissions limitations and monitoring requirements to which a source may be subject, a deviation from one requirement may not be a deviation under another requirement which recognizes an exception and/or special circumstances relating to that same event.

Under the Emergency provisions of Part 70, certain operational conditions may act as an affirmative defense against enforcement action if they are properly reported.

DEFINITIONS

Malfunction (NSPS) means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or 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.

Malfunction (SIP) means any sudden and unavoidable failure of air pollution control equipment or process equipment or unintended failure of a process to operate in a normal or usual manner. Failures that are primarily caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

Emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

Monitoring and Permit Deviation Report - Part I

1. Following is the **required** format for the Monitoring and Permit Deviation report to be submitted to the Division as set forth in General Condition 21. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

2. Part II of this Appendix B shows the format and information the Division will require for describing periods of monitoring and permit deviations, or malfunction or emergency conditions as indicated in the Table below. One Part II Form must be completed for each Deviation. Previously submitted reports (e.g. EER's or malfunctions) may be referenced and the form need not be filled out in its entirety.

FACILITY NAME: Public Service Company of Colorado – Pawnee Station
OPERATING PERMIT NO: 96OPMR129
REPORTING PERIOD:_____ (see first page of the permit for specific reporting period and dates)

Operating Permit Unit ID	Unit Description	Deviations noted During Period?[1]		Malfunction/ Emergency Condition Reported During Period?	
		YES	NO	YES	NO
B001	Boiler No. 1 (Unit 1), Foster Wheeler, Opposed Fired, Natural Circulation Boiler, Rated at 5,346 MMBtu/hr. Coal-Fired, with Natural Gas and/or No. 2 Fuel Oil Used for Startup, Shutdown and/or Flame Stabilization.				
B002	Boiler No. 2 (Auxiliary Boiler), Babcock and Wilcox, Package Boiler, Model and Serial No. FM-2763, Rated at 114.3 MMBtu/hr (No. 2 Fuel Oil) and 98 MMBtu/hr (Natural Gas). Natural Gas, No. 2 Fuel Oil or Combination Fired.				
F001	Fugitive Particulate Emissions from Coal Handling and Storage (Railcar Unloading, Storage Pile and Coal Dozing)				
F002	Fugitive Particulate Emissions from Ash Handling and Disposal				
F003	Fugitive Particulate Emissions from Paved and Unpaved Roads				
P001	Coal Handling System (Crushers, Transfer Towers, and Conveying)				
P002	Ash Silo				
P003	Soda Ash Handling System				
M001	Cooling Water Tower				
P004	One (1) Sorbent Storage Silo				
M002	One (1) Detroit Allison, Model No. 70847010, Serial No. 8VA387829, diesel-fired engine driving an emergency fire pump. This engine is rated at 230 hp and 20 gal/hr.				
	General Conditions				
	Insignificant Activities				

[1] See previous discussion regarding what is considered to be a deviation. Determination of whether or not a deviation has occurred shall be based on a reasonable inquiry using readily available information.

Monitoring and Permit Deviation Report - Part II

FACILITY NAME: Public Service Company of Colorado – Pawnee Station
OPERATING PERMIT NO: 96OPMR129
REPORTING PERIOD:

Is the deviation being claimed as an: Emergency _____ Malfunction _____ N/A _____

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction ____
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Operating Permit Condition Number Citation

Explanation of Period of Deviation

Duration (start/stop date & time)

Action Taken to Correct the Problem

Measures Taken to Prevent a Reoccurrence of the Problem

Dates of Malfunctions/Emergencies Reported (if applicable)

Deviation Code (for Division Use Only)

SEE EXAMPLE ON THE NEXT PAGE

EXAMPLE

FACILITY NAME: Acme Corp.
OPERATING PERMIT NO: 96OPZZXXX
REPORTING PERIOD: 1/1/06 - 6/30/06

Is the deviation being claimed as an: Emergency _____ Malfunction __XX____ N/A ____

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction ____
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Asphalt Plant with a Scrubber for Particulate Control - Unit XXX

Operating Permit Condition Number Citation

Section II, Condition 3.1 - Opacity Limitation

Explanation of Period of Deviation

Slurry Line Feed Plugged

Duration

START- 1730 4/10/06
END- 1800 4/10/06

Action Taken to Correct the Problem

Line Blown Out

Measures Taken to Prevent Reoccurrence of the Problem

Replaced Line Filter

Dates of Malfunction/Emergencies Reported (if applicable)

5/30/06 to A. Einstein, APCD

Deviation Code (for Division Use Only)

Monitoring and Permit Deviation Report - Part III

REPORT CERTIFICATION

SOURCE NAME: Public Service Company of Colorado – Pawnee Station

FACILITY IDENTIFICATION NUMBER: 0870011

PERMIT NUMBER: 96OPMR129

REPORTING PERIOD:_____ (see first page of the permit for specific reporting period and dates)

All information for the Title V Semi-Annual Deviation Reports must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. This signed certification document must be packaged with the documents being submitted.

STATEMENT OF COMPLETENESS

I have reviewed the information being submitted in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this submittal are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in Sub-Section 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of Sub-Section 25-7 122.1, C.R.S.

Printed or Typed Name | Title

Signature | Date Signed

Note: Deviation reports shall be submitted to the Division at the address given in Appendix D of this permit. No copies need be sent to the U.S. EPA.

APPENDIX C

Required Format for Annual Compliance Certification Report

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Following is the format for the Compliance Certification report to be submitted to the Division and the U.S. EPA annually based on the effective date of the permit. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

FACILITY NAME: Public Service Company of Colorado – Pawnee Station

OPERATING PERMIT NO: 96OPMR129
REPORTING PERIOD:

I. Facility Status

___ During the entire reporting period, this source was in compliance with **ALL** terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the Permit.

___ With the possible exception of the deviations identified in the table below, this source was in compliance with all terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference, during the entire reporting period. The method used to determine compliance for each term and condition is the method specified in the Permit, unless otherwise indicated and described in the deviation report(s). Note that not all deviations are considered violations.

Operating Permit Unit ID	Unit Description	Deviations Reported [1]		Monitoring Method per Permit?[2]		Was Compliance Continuous or Intermittent[3]	
		Previous	Current	YES	NO	Continuous	Intermittent
B001	Boiler No. 1 (Unit 1), Foster Wheeler, Opposed Fired, Natural Circulation Boiler, Rated at 5,346 MMBtu/hr. Coal-Fired, with Natural Gas and/or No. 2 Fuel Oil Used for Startup, Shutdown and/or Flame Stabilization.						
B002	Boiler No. 2 (Auxiliary Boiler), Babcock and Wilcox, Package Boiler, Model and Serial No. FM-2763, Rated at 114.3 MMBtu/hr (No. 2 Fuel Oil) and 98 MMBtu/hr (Natural Gas). Natural Gas, No. 2 Fuel Oil or Combination Fired.						

Operating Permit Unit ID	Unit Description	Deviations Reported [1]		Monitoring Method per Permit?[2]		Was Compliance Continuous or Intermittent[3]	
		Previous	Current	YES	NO	Continuous	Intermittent
F001	Fugitive Particulate Emissions from Coal Handling and Storage (Railcar Unloading, Storage Pile and Coal Dozing)						
F002	Fugitive Particulate Emissions from Ash Handling and Disposal						
F003	Fugitive Particulate Emissions from Paved and Unpaved Roads						
P001	Coal Handling System (Crushers, Transfer Towers, and Conveying)						
P002	Ash Silo						
P003	Soda Ash Handling System						
M001	Cooling Water Tower						
P004	One (1) Sorbent Storage Silo						
M002	One (1) Detroit Allison, Model No. 70847010, Serial No. 8VA387829, diesel-fired engine driving an emergency fire pump. This engine is rated at 230 hp and 20 gal/hr.						
	General Conditions						
	Insignificant Activities [4]						

[1] If deviations were noted in a previous deviation report, put an "X" under "previous". If deviations were noted in the current deviation report (i.e. for the last six months of the annual reporting period), put an "X" under "current". Mark both columns if both apply.

[2] Note whether the method(s) used to determine the compliance status with each term and condition was the method(s) specified in the permit. If it was not, mark "no" and attach additional information/explanation.

[3] Note whether the compliance status with of each term and condition provided was continuous or intermittent. "Intermittent Compliance" can mean either that noncompliance has occurred or that the owner or operator has data sufficient to certify compliance only on an intermittent basis. Certification of intermittent compliance therefore does not necessarily mean that any noncompliance has occurred.

NOTE:

The Periodic Monitoring requirements of the Operating Permit program rule are intended to provide assurance that even in the absence of a continuous system of monitoring the Title V source can demonstrate whether it has operated in continuous compliance for the duration of the reporting period. Therefore, if a source 1) conducts all of the monitoring and recordkeeping required in its permit, even if such activities are done periodically and not continuously, and if 2) such monitoring and recordkeeping does not indicate non-compliance, and if 3) the Responsible Official is not aware of any credible evidence that indicates non-compliance, then the Responsible Official can certify that the emission point(s) in question were in continuous compliance during the applicable time period.

[4] Compliance status for these sources shall be based on a reasonable inquiry using readily available information.

II. Status for Accidental Release Prevention Program:

A. This facility _____ is subject _____ is not subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act)

B. If subject: The facility _____ is _____ is not in compliance with all the requirements of section 112(r).

1. A Risk Management Plan _____ will be _____ has been submitted to the appropriate authority and/or the designated central location by the required date.

III. Certification

All information for the Title V Semi-Annual Deviation Reports must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. This signed certification document must be packaged with the documents being submitted.

I have reviewed this certification in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this certification are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in § 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of § 25-7 122.1, C.R.S.

_____

Printed or Typed Name Title

_____

Signature Date Signed

NOTE: All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

APPENDIX D

Notification Addresses

1. **Air Pollution Control Division**

Colorado Department of Public Health and Environment
Air Pollution Control Division
Operating Permits Unit
APCD-SS-B1
4300 Cherry Creek Drive S.
Denver, CO 80246-1530

ATTN: Matt Burgett

2. **United States Environmental Protection Agency**

Compliance Notifications:

Office of Enforcement, Compliance and Environmental Justice
Mail Code 8ENF-T
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

Permit Modifications, Off Permit Changes:

Office of Partnerships and Regulatory Assistance
Air and Radiation Programs, 8P-AR
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

APPENDIX E

Permit Acronyms

Listed Alphabetically:

AIRS -	Aerometric Information Retrieval System
AP-42 -	EPA Document Compiling Air Pollutant Emission Factors
APEN -	Air Pollution Emission Notice (State of Colorado)
APCD -	Air Pollution Control Division (State of Colorado)
ASTM -	American Society for Testing and Materials
BACT -	Best Available Control Technology
BTU -	British Thermal Unit
CAA -	Clean Air Act (CAAA = Clean Air Act Amendments)
CCR -	Colorado Code of Regulations
CEM -	Continuous Emissions Monitor
CF -	Cubic Feet (SCF = Standard Cubic Feet)
CFR -	Code of Federal Regulations
CO -	Carbon Monoxide
COM -	Continuous Opacity Monitor
CRS -	Colorado Revised Statute
EF -	Emission Factor
EPA -	Environmental Protection Agency
FI -	Fuel Input Rate in MMBtu/hr
FR -	Federal Register
G -	Grams
Gal -	Gallon
GPM -	Gallons per Minute
HAPs -	Hazardous Air Pollutants
HP -	Horsepower
HP-HR -	Horsepower Hour (G/HP-HR = Grams per Horsepower Hour)
LAER -	Lowest Achievable Emission Rate
LBS -	Pounds
M -	Thousand
MM -	Million
MMscf -	Million Standard Cubic Feet
MMscfd -	Million Standard Cubic Feet per Day
N/A or NA -	Not Applicable
NOx -	Nitrogen Oxides
NESHAP -	National Emission Standards for Hazardous Air Pollutants
NSPS -	New Source Performance Standards
P -	Process Weight Rate in Tons/Hr
PE -	Particulate Emissions
PM -	Particulate Matter

PM_{10} -	Particulate Matter Under 10 Microns
PSD -	Prevention of Significant Deterioration
PTE -	Potential To Emit
RACT -	Reasonably Available Control Technology
SCC -	Source Classification Code
SCF -	Standard Cubic Feet
SIC -	Standard Industrial Classification
SO_2 -	Sulfur Dioxide
TPY -	Tons Per Year
TSP -	Total Suspended Particulate
VOC -	Volatile Organic Compounds

APPENDIX F

Permit Modifications

DATE OF REVISION	TYPE OF REVISION	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION
August 10, 2010	Minor Modification	Section I	Removed Section II, Condition 1.10 from the list of state-only requirements in Condition 1.4. Removed the 3rd column in the table in Condition 6.1 and renamed the 1st column "Emission Unit No./Facility ID".
		Section II.1	Added language to Condition 1.1.2 to note that the baseline opacity from the initial test has been set and to require the source to submit the proposed baseline opacity from any subsequent tests. Included the PM emissions factors from the latest stack test in Condition 1.2. Revised Condition 1.2 to indicate that the emission factor from the "most recent" performance test shall be used to calculate PM emissions. Condition 1.10 was revised to remove the state-only lead standard of 1.5 $\mu g/m^3$. Added the baseline opacity level in Condition 1.15.1.2 (CAM requirements).
		Section II.9	Added alternative opacity monitoring requirements to Condition 9.4.3. These are the same requirements that were included in the original T5 permit issued January 1, 2003.
		Section II.11	Removed Condition 11.1 (Reg 8 lead standard).
		Section V	Labeled the 3rd paragraph of General Condition 29.a as 29.b and added the provisions in Reg 7, Section III.C as paragraph e. Revised the version date.
		Appendix H	Added the 24-hour opacity indicator levels. Changed references in the table that indicate "semi-annual" to "annual". In addition, the language specifying that startups, shutdowns and malfunctions did not have to be included in the 24-hour average opacity was removed from Section III.c Section III.c was also revised to include further justification of the 15% opacity indicator, to further clarify the justification of the 24-hr opacity indicator, to remove language indicating the 24-hr opacity indicator was presumptively acceptable and to discuss why past performance test data was not used to set the 24-hour opacity indicator. In addition, the table in Section III.a was revised, in part to include the performance test results from the 2010 test which were used to set the 24-hr opacity indicator.
November 4, 2010	Administrative Amendment	Appendix H	Removed the sentence indicating that startups, shutdowns and malfunctions can be excluded from the 24-hr average opacity from Section II (Table, Section III.f – averaging time for indicator 1 (visible emissions)) of the CAM plan.
November 15, 2011	Reopening	Section I	Added the emergency fire pump to the facility description in Condition 1.1 and the table in Condition 6.1. Identified Section II, Condition 14 as a state-only .requirement in Condition 1.4.

DATE OF REVISION	TYPE OF REVISION	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION
November 15, 2011	Reopening	Section II.1	Added language to Condition 1.1 indicating that on the compliance date for the regional haze PM limit, compliance with the PM limit in Condition 1.1 is presumed provided compliance with the regional haze PM limit is indicated by the required monitoring. Minor changes were made to Condition 1.15.1.2 to address the method used to set the 24-hr opacity indicator for the regional haze PM limit.
		Section II.5	Conditions 5.1.1, 5.2.1.2, 5.6.2 and 5.6.3 were revised to clarify that procedures were to be maintained and to require that records be kept. Condition 5.2.2 was revised to refer operation of bin vent filters to Condition 5.6.2. Condition 5.7 was revised to require Method 22 observations of the transfer tower/tripper deck and crusher baghouses to be conducted monthly and to require a Method 22 of the coal handling system after the bag leak detectors alarm. In addition, language was added regarding the bag leak detectors. Language was added to Condition 5.8 to clarify that subject equipment includes the transfer tower/tripper deck and crusher baghouses. In addition, monitoring language changes were made to Conditions 5.8.1 and 5.8.2 to rely on the additional monitoring required by Condition 5.7.
		Section II.14	Removed the requirements related to the BART construction permit (07MR0111B) and included the requirements in Colorado Regulation No. 3, Part F (regional haze requirements) applicable for Unit 1.
		Section II.15	Included requirements for the emergency fire pump engine.
		Section III.3	The reporting of CAM excursions noted in Reg 3, Part F, Section VII.E was included in the table for streamlined conditions.
		Appendices	Removed the emergency fire pump from the insignificant activity list in Appendix A. Included the emergency fire pump in the tables in Appendices B and C. Made minor revisions to the CAM plan (Appendix H) to address the Regional Haze PM limit (future requirement).
November 15, 2011	Administrative Amendment	Page Following Cover Page	Revised the responsible official and the permit contact. Included the full company name (i.e., "Public Service Company of Colorado", rather than "Public Service Company")
		Headers and Footers	Included the full company name (i.e., "Public Service Company of Colorado", rather than "Public Service Company")
		Section I	Revised the description in Condition 1.1 to indicate there is only one sorbent silo. The table in Condition 6.1 was revised to indicate there is one sorbent silo (P004) and to clarify baghouse information.
		Section II.1	Identified the numerical opacity standard in the text in Conditions 1.11 through 1.13.
		Section II.3	Condition 3.3.1 should have been identified as Condition 3.4, this was corrected.
		Section II.5	Revised the summary table for P004 to indicate there is one sorbent silo and to indicate that the startup notice (Condition 5.11) is due 30 days "before" startup, rather than 30 days "after" startup.

DATE OF REVISION	TYPE OF REVISION	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION
November 15, 2011	Administrative Amendment	Section II.9	Corrected the permit condition numbers referenced in Conditions 9.5.2 and 9.5.3. The phrase "may elect to" in the first paragraph of Condition 9.4.3 was replaced with "shall".
		Section III	Revised the designated representative and the alternate designated representative.
		Section V	Changed the version date. Some minor format and language changes were made to Condition 29 (VOC). The primary change was the addition of a paragraph indicating to which types of areas (e.g. ozone nonattainment) the various requirements apply to.
		Appendices	Corrected the description for the emergency generator diesel fuel tank and the hydrogen seal oil tank in the insignificant activity list in Appendix A. Included the full company name (i.e., "Public Service Company of Colorado", rather than "Public Service Company") to the reports included in Appendices B and C. The tables in Appendices B and C were revised to indicate there is one sorbent silo (P004). Changed the Division contact for reports in Appendix D.

APPENDIX G

Emission Factors For Sources of Fugitive Particulate Matter Emissions

Coal Handling

Emissions from wind erosion of coal pile:

The following equation was used to estimate emissions from wind erosion (from "Control of Open Fugitive Dust Sources", EPA-450/3-88-008, dated September 1988, Section 4.1.3):

$$E = 1.7 \times (s/1.5) \times [(365-p)/235] \times (f/15)$$

Where:
- E = emissions, in lbs/day/acre
- s = silt content of aggregate, percentage [PSCo used 2.2%, per AP-42 (dated 1/95), Table 13.2.4-1 (coal as received from coal-fired power plant)]
- p = number of days with > 0.01 inches of precipitation per year [PSCo used 80, per AP-42 (dated 1/95), Figure 13.2.2-1]
- f = percentage of time that wind speed exceeds 5.4 m/s at mean pile height [PSCo used 26 % 1985 on-site meteorological data, which is conservative since the ash is dumped into a pit]

In addition, PSCo presumed that PM_{10} = 0.36 x PM. This value since it is consistent with the information currently in AP-42.

Unloading of Coal:

Emissions from Coal Unloading were estimated using the equation for emissions from drop/transfer points in AP-42 (dated January 1995), Section 13.2.4.

$$E = \frac{k \times 0.0032 \times (U/5)^{1.3} \times D \times \text{tons of coal transferred per year}}{(M/2)^{1.4}}$$

Where:
- E = particulate emissions, lbs/yr
- k = particle size multiplier, dimensionless (0.74 for PM and 0.35 for PM_{10})
- U = mean wind speed, mph
- D = number of transfer points, dimensionless
- M = moisture content, %

Coal Dozing:

Emission factors from AP-42 (dated July 1998), Section 11.9 (Western Surface Coal Mining), Table 11.9-1 were used to estimate emissions from coal dozing.

$$E, PM = \frac{78.4 \times s^{1.2}}{M^{1.3}}$$

$$E, PM_{10} = 0.75 \times \left(\frac{18.6 \times s^{1.5}}{M^{1.4}}\right)$$

Where: E = emissions, in lbs/hr
s= silt content, in percent [PSCo used 2.2% per AP-42 (dated 1/95), Table 13.2.4-1 (coal as received from coal-fired power plant)]
M = moisture content, % [PSCo used 4.5% per AP-42 (dated 1/95), Table 13.2.4-1 (coal as received from coal-fired power plant)]

Ash Handling

Emissions from Wind Erosion of Ash Pit

Emissions were estimated using the same equation for wind erosion as for coal handling as discussed above. The only difference being that a silt content of 80% was used for the ash pit (from AP-42 (dated 1/95), Table 13.2.4-1 (fly ash).

Ash Dumping

Emissions were estimated using emission factors from the AWMA Air Pollution Engineering Manual (Second Edition, 2000), Table 1, page 693:

PM = 0.2 lbs/ton transferred or conveyed
PM_{10} = 0.072 lbs/ton transferred or conveyed

PM_{10} is presumed to be 0.36 x PM

Vehicle Travel on Paved and Unpaved Roads

Unpaved Roads

Emissions from travel on unpaved roads were estimated using emission factors from AP-42 (dated September 1998), Section 13.2.2 Unpaved Roads, as follows:

$$E = \frac{k \times (s/12)^a \times (W/3)^b}{(M/0.2)^c}$$

where:
E = particulate emissions, in lbs/VMT
VMT = vehicle miles traveled per year
k = constant, dimensionless, see table below
a = constant, dimensionless, see table below
b = constant, dimensionless, see table below
c = constant dimensionless, see table below
s = silt content of road surface material, in % (PSCo used 6.6, per AP-42, Table 13.2.2-1, for municipal solid waste landfills)
W = mean weight of vehicle, in tons (per PSCo W = 28)
M = surface moisture content, % (PSCo used 1.45 %)

Constant	PM	PM_{10}
k	10	2.6
a	0.8	0.8
b	0.5	0.4
c	0.4	0.3

Paved Roads

Emissions from travel on paved roads are estimated using the emission factor for unpaved roads and applying a control efficiency of 85%.

APPENDIX H

Compliance Assurance Monitoring Plan

I. Background

a. Emission Unit Description:

Unit 1, Foster Wheeler Boiler, Serial No. 2-79-2381, Opposed Fired, Natural Circulation, Rated at 5,346 MMBtu/hr. Coal-Fired with Natural Gas and/or No. 2 Fuel Oil Used for Startup, Shutdown and/or Flame Stabilization.

b. Applicable Regulation, Emission Limit, Monitoring Requirements:

Regulations:	Operating Permit Conditions 1.1 (Colorado Regulation No. 1, Section II.A.1.c) and 14.2 (Colorado Regulation No. 3, Part F, Section VI.C.2)	
Emission Limitations:	PM	0.1 lb/MMBtu
	PM	0.03 lb/MMBtu (future requirement)
Monitoring Requirements:	Visible Emissions (Opacity) and Preventative Maintenance	

c. Control Technology:

This boiler is equipped with a fabric filter dust collector (FFDC) to control particulate matter emissions generation from the combustion of coal. The FFDC has a particulate removal efficiency greater than 99%.

II. Monitoring Approach

	Indicator 1	Indicator 2
I. Indicator	Visible Emissions (Opacity)	Preventative Maintenance
Measurement Approach	Opacity emissions will monitored by a Continuous Opacity Monitor (COM).	Internal inspections of the baghouse will be conducted annually. In the event of an opacity excursion (opacity either exceeds 15% for 60 seconds or more or the 24-hour average opacity exceeds the baseline level) an additional internal baghouse inspection shall be conducted within three (3) months of the excursion (initial excursion if more than one). No more than two internal baghouse inspections are required in any calendar year. The baghouse is inspected visually for deterioration and areas of corrosion or erosion. The bags are inspected for holes and tears, and are repaired and replaced as necessary. Door seals are inspected for tightness.
II. Indicator Range	An excursion is defined as an opacity value greater than 15% for 60 seconds or more. When this occurs, the last compartment to be cleaned in automatic cycle is investigated. An excursion is also defined as any 24-hour period in which the average opacity exceeds the baseline level established as required by Conditions 1.1.2 and/or 14.2.2. The baseline opacity set by the April 2010 performance test required by Condition 1.1.2 is 5.0%. This value serves as the baseline opacity until the baseline is re-established as specified in Conditions 1.1.2 and/or 14.2.2. In addition to the above, when an excursion occurs, the appropriate corrective action is made and repairs and/or replacements are made as necessary. A history of the corrective action(s) will be maintained at the facility and made available upon request.	An excursion is defined as failure to perform the semi-annual inspection within 60 days of its scheduled completion date. An excursion is also defined as failure to perform an additional inspection within three months of an opacity excursion (initial excursion if more than one excursion occurs). An excursion triggers an immediate inspection.

	Indicator 1	Indicator 2
III. Performance Criteria		
a. Data Representativeness	An increase in visible emissions (opacity) under steady-state operating conditions is an indirect indication of a potential increase in particulate matter emissions.	Internal inspections can be used to identify torn bags and/or bags with diminished integrity. Torn bags and/or bags with diminished integrity can be an indication of baghouse issues and potentially an increase in particulate matter emissions.
b. Verification of Operational Status	Operational status shall be demonstrated through the continuous process on/off signal recorded by the Data Acquisition and Handling System (DAHS).	Documentation in plant records will serve as the verification that the annual inspection has been performed.
i)c. QA/QC Practices and Criteria	The COM equipment and data quality assurance is in conformation with the applicable requirements in 40 CFR Part 60 and the internal CEM Quality Control/Quality Assurance program developed in accordance with 40 CFR Part 75.	Trained personnel perform inspections and maintenance using an established procedures and checklist. Such procedures and checklists shall be made available to the Division upon request.
d. Monitoring Frequency	Continuous	Annual
e. Data Collection Procedures	Opacity measurements will be performed in accordance with the requirements in 40 CFR Part 60 Subpart A § 60.13. The emissions data will be stored in the unit's DAHS.	Results of inspections and maintenance activities are recorded by the plant and made available upon request.
f. Averaging Time	COM data shall be reduced to 6-minute averages as required by 40 CFR Part 60 Subpart A § 60.13. All 6-minute averages in each 24-hour period (7 am to 7 am) will be averaged together to get a 24-hour average.	N/A

III. Justification

a. Background:

The pollutant specific emission unit is one (1) coal fired boiler, with natural gas and/or No. 2 fuel oil used for startup, shutdown and/or flame stabilization. The boiler is equipped with a FFDC to control particulate matter emissions.

Particulate matter removal is accomplished by passing the flue gases through a porous fabric material. The solid particles buildup on the fabric surface to form a thin porous layer of solids. This layer works in conjunction with the fabric material to trap the particulate matter. According to the CAM plan submitted by the source, the baghouse manufacturer guarantees a particulate removal efficiency greater than 99%. The results of the performance tests conducted for this unit are indicated below:

	Particulate Matter Emissions (lbs/MMBtu)	
	Performance Test Result	Emission Limitations
2003 Performance Test	6.73×10^{-3}	0.1 0.03 (future requirement)
2010 Performance Test	1.26×10^{-4}	0.1 0.03 (future requirement)

Note that the 24-hour opacity indicator included in the CAM plan is based on the 2010 performance test.

b. Rationale for Selection of Performance Indicators

Monitoring of the baghouse operational parameters is intended to keep the baghouse operating within the manufacturer's specifications. Based on the manufacturer's guarantees and actual performance test data on this unit, it can be concluded that when the baghouse emissions controls are operated as designed, particulate emissions are controlled to levels well below the applicable particulate emission standard. As such, the requirements of compliance assurance monitoring for particulate matter emissions from these units can be accomplished through the monitoring of the selected performance indicators. Monitoring these indicators will signal the potential need for corrective actions to avoid potential problems with any of these factors.

Potential issues in the operation of a baghouse that can compromise its ability to effectively control particulate emissions can generally be categorized as issues with torn and/or broken bags or seals, and characteristics of the ash cake on the bags. The indicators described below were selected for their ability to provide an indication or warning of potential problems with any of these factors.

Visible Emissions (Opacity)

Based on the relationship between particulate matter in a flue gas stream and opacity, an increase in opacity is a valid indication of increased particulate emissions due to compromised baghouse performance. Increased opacity emissions from typical levels, such as a sudden spike or a gradual increase are an indication that baghouse performance has decreased.

Preventative Maintenance

Preventative maintenance is performed on the baghouses to ensure that they are operated and maintained in accordance with the manufacturer's guidelines.

c. Rationale for Selection of indicator Ranges

Visible emissions (opacity)

The source proposed that a spike in opacity, defined as an opacity reading greater than 15% for sixty (60) seconds or more is an indication of potential reduction in baghouse performance. In response to this indicator, the last compartment to be cleaned in automatic cycle is investigated.

The Division agrees that a sudden spike in opacity is a reasonable indicator that the baghouse operation may have been compromised. The 15% indicator level is below the opacity limitations set for both units. PSCo submitted information indicating that the 15% opacity indicator is based on operating experience. In their submittal, PSCo indicated that based on their years of operating experience an opacity spike of 15% opacity for 60 seconds or more is generally an indicator that there is a problem with the baghouse and that an opacity spike below that set point would pick up spikes in opacity that are seen with normal operation. Although PSCo has not correlated 15% to a level of PM emissions, this is a short term (one minute or more) indicator of baghouse performance and as specified in 40 CFR Part 64 § 64.4(c)(1), emission testing is not required to be conducted over the indicator range or range of potential emissions. Given that the PM standard is based on the average of three one (1) hour tests and past performance tests indicate that the PM emissions are less than 50% of the standard, the short term 15% opacity indicator serves to provide an indication of proper baghouse operation and as such can be reasonable indicator that the units are in compliance with the PM limitations.

Although the source proposed an indicator range of "an increase in opacity above baseline conditions during normal operations to opacity emissions greater than 10% over an extended period of time", the Division considered such a range to be inappropriate, since neither the time period (i.e., averaging time) was defined and it was not clear how the 10% opacity related to the PM emission limitations. Specifically PSCo did not correlate the 10% opacity to a PM emission level, nor did they submit any performance test data with their CAM plan.

Therefore, the Division is including as CAM a 24-hr average opacity indicator, which is similar to the monitoring required for control devices (e.g. baghouses) used to meet the particulate matter standards under NSPS Da. For new (constructed after February 28, 2005) electric utility steam generating units NSPS Subpart Da specifies that a baseline opacity level be established and that any 24-hr average opacity value that exceeds the baseline level shall be cause for investigating the control device.

The 24-hr average opacity indicator range will be set in a manner similar to the methodology specified in 40 CFR Part 60 Subpart Da § 60.48Da(o)(2)(iii), which states that the baseline opacity is established during the performance test by averaging all 6-minute average opacity values from the COMS recorded during each of the test runs and then adding a 2.5% opacity to the calculated average opacity. If the NSPS Da baseline opacity (average during test run plus 2.5%) is less than 5%, then the baseline opacity is set at 5%. Since Unit 1 is subject to less stringent particulate matter standards than the NSPS Da standards for new units (0.1 lb/MMBtu vs. 0.015 lb/MMBtu), the Division is allowing an opacity value up to 5% to be added to the calculated opacity average from the performance test. The actual allowable opacity add-on is based on the results of the performance test. Also, as provided for in NSPS Da, if the baseline opacity (COMS average plus add-on) is less than 5%, then the baseline opacity (i.e., the indicator range) is set at 5%. Note that when the more stringent Regional Haze limit takes effect, the maximum opacity add-on shall be set at 3.5% rather than 5%. Since the Regional Haze limit is less

stringent than the NSPS Da standard for new units (0.03 lb/MMBtu vs. 0.015 lb/MMBtu), the Division is allowing for a higher value for the opacity add-on than provided for in NSPS Da.

Since the 24-hr opacity indicator is very similar to the control device monitoring required for new units under NSPS Da, the Division considers that the 24-hr opacity indicator is acceptable for CAM.

The Division intends to require that a performance test be conducted within 180 days of renewal permit issuance to demonstrate compliance with the PM emission limitation, therefore, the permit will require that the source set the baseline opacity during this test. Although performance tests were conducted on this unit in 2003 and information on opacity emissions during these tests may be available (PSCo is only required to retain monitoring data for five years after it is generated) and thus may be used to set the indicator range(s), the Division considers that it is more appropriate to set the indicator range(s) on more recent tests. As indicated in 40 CFR Part 64 § 64.4(e)(2), if installation of equipment and/or performance testing to set indicator ranges is necessary prior to performing the monitoring under CAM, then the schedule for completing installation and/or testing and beginning operation of the monitoring shall be as expeditiously as practicable but no longer than 180 days after approval of the permit. To that end, the permittee conducted performance tests in April 2010 and began monitoring the 24-hour opacity averages consistent with the baseline values set in those tests. Since the renewal permit was issued in January 1, 2010, the indicator ranges were set and monitoring commenced within 180 days of renewal permit issuance, as required by § 64.4(e)(2).

Preventative Maintenance

Although the source proposed to use monthly reviews of historic minute opacity data and that those reviews would be used to trigger repairs or corrective action. Since it isn't clear how these reviews would trigger repairs the Division considered that a more definitive measure for defining preventative maintenance would be annual internal inspections of the baghouse. The Division would consider that failure to conduct annual inspections may compromise the ability of the FFDC to function as designed. Note that the Division considers that an additional inspection shall be required in the event of an opacity excursion. As such, the Division is including in this CAM plan a requirement to perform internal inspections in order to ensure proper baghouse function and perform required repairs and maintenance of the bags as needed.

APPENDIX I

Mercury (Hg) Monitoring Plan

Public Service submitted a Hg Monitoring Plan on December 19, 2008 as required by Colorado Regulation No. 6, Part B, Section VIII.E.4.b. The Plan was subsequently revised and resubmitted on May 7, 2009. The revised Hg Monitoring Plan is attached.

CONTINUOUS MERCURY MONITORING SYSTEM

MONITORING PLAN

Source Designation:
Public Service Company of Colorado
Pawnee Station Unit 1
14940 County Road 24
Brush, Co 80723

Concerning:
Thermo Scientific Mercury Freedom System
Serial No: 0713822425

INTRODUCTION

The Public Service Company of Colorado (PSCo) Pawnee Station is located in Brush, Colorado, and consists of a single dry bottom, wall-fired boiler supplying steam to a single turbine for the purpose of generating electricity. The boiler currently operates with a low NOx burner system with overfire air. Continuous mercury (Hg) emission monitoring will be performed for Unit 1 with sampling ports located on the stack.

This monitoring plan is presented in accordance with Colorado Air Quality Control Commission Regulation Number 6, Part B, Section VIII E.4.

MONITORING PLAN

1. Overview and Monitoring Approach

The Thermo Scientific Mercury Freedom monitoring system at Pawnee will provide a flue gas mercury concentration, on a wet basis, in units of $\mu g/m^3$. This will be done by sampling on a 10 second averaging period, upon which minute data, then 15 minute data, and eventually one hour average concentrations are calculated by the Data Acquisition and Handling System (DAHS). This monitoring approach satisfies the requirements of 40 CFR Part 60.50Da.(h) along with the intent of the Mercury Monitoring Requirements of Colorado Regulation Number 6.

The entire mercury monitoring system consists of the following; a stack mounted dilution probe, a mercury chloride generator, and a dry converter housed in an insulated enclosure that is mounted at the 420-foot level of the Pawnee Unit 1 stack along with the existing continuous emissions monitoring (CEMs) equipment. A sample line, or umbilical, connects the stack-mounted equipment with the equipment located adjacent to the stack wall in the existing CEMs shelter.

Three separate instruments in the shelter consisting of a probe controller, a mercury analyzer, and an elemental mercury calibrator. The probe controller connects to the stack probe and mercury converter and automates probe calibration. The analyzer, which uses advanced cold vapor atomic fluorescence analysis, provides continuous measurement. The elemental mercury generator utilizes a vapor generator to provide the required elemental mercury gas for the appropriate certification and ongoing quality assurance (QA) testing. This calibration gas is injected upstream of the inertial filter.

2. Quality Assurance/Quality Control

PSCo will perform the following certification and ongoing quality assurance testing on the mercury monitoring system:

Initial certification:
7-day Calibration Error Test
Linearity Check
Three-level System Integrity Check
Cycle Time Test
Relative Accuracy Test Audit (RATA)

On-going quality assurance:
Daily Calibration Error Test
Weekly One-level System Integrity Check
Quarterly Linearity Check
Annual RATA

3. CALCULATIONS

PSCo is using the following equation to determine the hourly Hg mass emissions when using a Hg concentration monitoring system that measures on a wet basis in conjunction with a stack flow monitor:

$E_h = (K\ C_h\ Q_h\ t_h)/16$ (Eq. 1)

Where:
E_h= Hg mass emissions for the hour, (lb);
K = Units conversion constant, 9.978×10^{-10} oz-scm/µgm-scf.
C_h= Hourly H_g concentration, wet basis, (µgm/wscm).
Q_h= Hourly stack gas volumetric flow rate, (scfh).
t_h= Unit operating time, i.e., the fraction of the hour for which the unit operated. For example, t_h = 0.50 for a half-hour of unit operation and 1.00 for a full hour of operation.

PSCo will use the equation below to calculate the monthly Hg emission rate on an output basis in pounds/Giga-watt hours (lb/GWh).

$$ER = \frac{M}{P}$$ (Eq. 2)

Where:
ER = Monthly Hg emission rate, (lb/GWh);
M = Total mass of Hg emissions for the month, from Equation 1, above, (lb); and
P = Total electrical output for the month, for the hours used to calculate M, (GWh).

When 12 monthly Hg emission rates have been accumulated on December 31, 2012, the first 12-month rolling total will be calculated using equation 3 below. Then, for each subsequent calendar month, equation 3 below will be used to calculate the 12-month rolling average as a weighted average of the Hg emission rate for the current month and the Hg emission rates for the previous 11 months. The only acceptation to this approach will be for calendar months in which the unit does not operate (zero unit operating hours). In this case, those months with zero operating hours will not be included in the 12-month rolling average.

$$E_{avg} = \frac{\sum_{i=1}^{12}(ER_i \times n_i)}{\sum_{i=1}^{12} n_i}$$ (Eq. 3)

Where:
E_{avg}= Weighted 12-month rolling average Hg emission rate, (lb/GWh).
ER_i= Monthly Hg emission rate, for month “i”, (lb/GWh).
n = Number of unit operating hours in month “i” with valid CEM and electrical output data, excluding hours of unit startup, shutdown, and malfunction.