

# STATE OF COLORADO

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT  
AIR POLLUTION CONTROL DIVISION  
TELEPHONE: (303) 692-3150



## CONSTRUCTION PERMIT

PERMIT NUMBER: **10EP402**

**Issuance 2**

DATE ISSUED: 12/27/2016

ISSUED TO: **Colorado Springs Utilities**

THE SOURCE TO WHICH THIS PERMIT APPLIES IS DESCRIBED AND LOCATED AS FOLLOWS:

Martin Drake Power Plant facility, located at 700 South Conejos Street, Colorado Springs, in El Paso County, Colorado.

THE SPECIFIC EQUIPMENT OR ACTIVITY SUBJECT TO THIS PERMIT INCLUDES THE FOLLOWING:

Facility Equipment ID	AIRS Point	Description	Allowable Fuels	Control Device
B007	006	One (1) Babcock and Wilcox Pulverized Coal Front Fired Dry Bottom Boiler Design Rated at 1,336 MMBtu per hour Coal Design Rated at 1,310 MMBtu per hour Natural Gas SN: 23463	Coal Natural Gas	Fabric Filter (particulate) Flue Gas Desulfurization System (FGD) (SO <sub>2</sub> ) (installed by 12/31/2017) Ultra Low NO <sub>x</sub> Burners and Over Fire Air (NO <sub>x</sub> )

THIS PERMIT IS GRANTED SUBJECT TO ALL RULES AND REGULATIONS OF THE COLORADO AIR QUALITY CONTROL COMMISSION AND THE COLORADO AIR POLLUTION PREVENTION AND CONTROL ACT C.R.S. (25-7-101 et seq), TO THOSE GENERAL TERMS AND CONDITIONS INCLUDED IN THIS DOCUMENT AND THE FOLLOWING SPECIFIC TERMS AND CONDITIONS:

### REQUIREMENTS TO SELF-CERTIFY FOR FINAL APPROVAL

1. Within one hundred and eighty days (180) after permit issuance, compliance with the conditions contained on this permit shall be demonstrated to the Division. It is the permittee's responsibility to self certify compliance with the conditions. Failure to demonstrate compliance within 180 days may result in revocation of the permit or enforcement action by the Division. Information on how to certify compliance was mailed with the permit or can be obtained from the Division's website at <https://www.colorado.gov/pacific/cdphe/air-permit-self-certification>. (Reference: Regulation Number 3, Part B, III.G.2).

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2. Within one hundred and eighty days (180) after permit issuance, the operator shall complete all initial compliance testing and sampling as required in this permit and submit the results to the Division as part of the self-certification process. (Reference: Regulation Number 3, Part B, III.E.)
  
3. The owner or operator shall develop an operating and maintenance (O&M) plan for the FGD, along with a recordkeeping format, that outlines how the applicant will maintain compliance on an ongoing basis with the requirements of this permit. **Compliance with the O&M plan shall commence at permit issuance.** Within one hundred and eighty days (180) after permit issuance, the owner or operator shall submit the O&M plan to the Division. Failure to submit an acceptable operating and maintenance plan could result in revocation of the permit. Note that the Division may modify the monitoring requirements as part of the Title V Operating Permit if this facility is subject to Title V permitting (Reference: Regulation Number 3, Part B, III.E.).

**EMISSION LIMITATIONS AND RECORDS**

4. Facility-wide Emissions of air pollutants from all emission units at Colorado Springs Utilities – Martin Drake Power Plant, including insignificant activities emissions and emissions from all permitted and grandfathered points, shall not exceed the following limitations. Monthly and annual records of the actual emissions shall be maintained by the applicant and made available to the Division for inspection upon request. (Reference: Colorado Regulation No. 3, Part B, Section II.A.4).

**Annual Limits:**

<b>Emissions per Averaging Year (Rolling 12 Month Total)</b> (ton per year)						
<b>TSP</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>VOC</b>	<b>CO</b>
--	--	--	<b>1,995.0</b>	--	--	--

**Monthly Limits:**

<b>Averaging Period</b>	<b>Emissions per Month (tons per calendar month)</b>						
	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>VOC</b>	<b>CO</b>
<b>January</b>	--	--	--	<b>410</b>	--	--	--
<b>February</b>	--	--	--	<b>410</b>	--	--	--
<b>March</b>	--	--	--	<b>410</b>	--	--	--
<b>April</b>	--	--	--	<b>410</b>	--	--	--
<b>May</b>	--	--	--	<b>410</b>	--	--	--
<b>June</b>	--	--	--	<b>410</b>	--	--	--
<b>July</b>	--	--	--	<b>410</b>	--	--	--
<b>August</b>	--	--	--	<b>410</b>	--	--	--
<b>September</b>	--	--	--	<b>410</b>	--	--	--
<b>October</b>	--	--	--	<b>410</b>	--	--	--
<b>November</b>	--	--	--	<b>410</b>	--	--	--
<b>December</b>	--	--	--	<b>410</b>	--	--	--

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During the first twelve (12) months of operation beginning on January 1, 2017, compliance with both the monthly and annual emission limitations shall be required. After the first twelve (12) months of operation, compliance with only the annual limitation shall be required.

Compliance with the SO<sub>2</sub> emission limits for B007 shall be monitored using the CEMS as required by Condition 16. The owner or operator shall comply with the 40 CFR Part 75 monitoring and recordkeeping requirements with the exception of the CEMS bias adjustment requirements.

Compliance with the monthly and annual emissions of SO<sub>2</sub> from Colorado Springs Utilities – Martin Drake Power Plant shall be determined by recording the facility’s annual emissions for SO<sub>2</sub> on a rolling twelve (12) month total that will begin on January 1, 2017. By the end of each month a new twelve-month total shall be calculated based on the previous twelve month’s data. The permit holder shall calculate actual emissions each month and keep a compliance record on site or at a local field office with site responsibility for Division review.

Please note that the rolling twelve month total emission calculation will begin on January 1, 2017; however, the calculation shall not include emissions data prior to January 1, 2017.

5. The following control equipment shall be maintained and operated to ensure satisfactory performance. The owner or operator shall monitor compliance with this condition through the approved compliance tests, compliance with the Operating and Maintenance Plan, compliance records, and the operating and maintenance requirements as specified in the Title V Operating Permit 95OPEP107, and other methods as approved by the Division (Colorado Regulation No. 3, Part B, Section III.E).

Facility Equipment ID	AIRS Point	Control Device	Controlled Pollutants
<b>B007</b>	<b>006</b>	Fabric Filter Baghouse	PM, PM <sub>10</sub> , and PM <sub>2.5</sub>
		Wet Dual Alkali Flue Gas Desulfurization (FGD) System	SO <sub>2</sub>
		Ultra Low NO <sub>x</sub> Burners and Over Fire Air	NO <sub>x</sub>

**PROCESS LIMITATIONS AND RECORDS**

6. The amount of fuel consumed shall be monitored and recorded on an annual basis. The fuel consumption shall be determined from belt scales, invoices, and inventory on hand as specified in the Title V Operating Permit 95OPEP107. Copies of all records shall be kept on site and made available for the Division review upon request.
7. The heat content of the coal fuel shall be calculated from the emissions recorded by the carbon dioxide CEMS or measured by testing as specified in the fuel sampling plan in the Title V Operating Permit 95OPEP107 and Appendix A of this Construction Permit.
8. The fuel sampling shall be conducted in accordance with the requirements identified in the most recent Division approved coal sampling/monitoring plan as specified in Appendix A of this Construction Permit.

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## **STATE AND FEDERAL REGULATORY REQUIREMENTS**

9. Except as provided for in Condition 10 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 twenty percent (20%) opacity (Reference: Colorado Regulation No. 1, Section II.A.1).
10. No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from startup or process modifications which is in excess of thirty percent (30%) opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Reference: Colorado Regulation No. 1, Section II.A.4).
11. **State Only Requirement:** This source is subject to the odor requirements of Regulation Number 2.
12. This source is subject to the National Emissions Standards for Hazardous Air Pollutants requirements of Regulation No. 8, Part E, Subpart UUUUU (40 CFR Part 63, Subpart UUUUU), for Coal- and Oil-Fired Electric Utility Steam Generating Units including, but not limited to, the following:

The requirements below reflect the rule language of 40 CFR Part 63, Subpart UUUUU published in the Federal Register on April 6, 2016. However, if revisions to this subpart are published at a later date, the owner or operator is subject to the requirements contained in the revised version of 40 CFR Part 63, Subpart UUUUU.

### **What This Subpart Covers**

- a. §63.9982 What is the affected source of this subpart?
  - i. §63.9982(a) – This subpart applies to each individual or group of two or more new, reconstructed, or existing affected sources(s).
  - ii. §63.9982(d) – An EGU is existing if it is not new or reconstructed. An existing electric steam generating unit that meets the applicability requirements after the effective date of this final rule due to a change in process is considered to be an existing source under this subpart.

The EGUs at this source commenced construction prior to May 3, 2011 and are considered existing EGUs under Subpart UUUUU.
- b. §63.9984 When do I have to comply with this subpart?
  - i. §63.9984(c) – You must meet the notification requirements in §63.10030 according to the schedule in §63.10030 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.

### **Emission Limitations and Work Practice Standards**

- c. §63.9990 What are the subcategories of EGUs?
  - i. §63.9990(a) Coal-fired EGUs are subcategorized as defined in paragraph (a)(1) and as defined in §63.10042.
    - a. §63.9990(a)(1) – EGUs designed for coal with a heating value greater than or equal to 8,300 Btu/lb/

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*Coal-fired electric utility steam generating unit means an electric utility steam generating unit meeting the definition of “fossil fuel-fired” that burns coal for more than 10.0 percent of the average annual heat input during the 3 previous calendar years after the compliance date for your facility in §63.9984 or for more than 15.0 percent of the annual heat input during any one of those calendar years. EGU owners and operators must estimate coal, oil, and natural gas usage for the first 3 calendar years after the applicable compliance date and they are solely responsible for assuring compliance with this final rule or other applicable standard based on their fuel usage projections. After the first 3 years of compliance, EGUs are required to evaluate applicability based on coal or oil usage from the three previous calendar years on an annual rolling basis (§63.10042).*

- d. §63.9991 – What emission limitations, work practice standards, and operating limits must I meet?
  - i. §63.9991(a)(1) - You must meet each emission limit and work practice standard in Table 2 and 3 to this subpart that applies to your EGU, for each EGU at your source except as provided in §63.1009.
    - a. As stated in §63.9991, you must comply with the following applicable emission limits<sup>1</sup>: If your EGU is a coal-fired unit not low rank virgin coal, you must meet the following emission limits and work practice standards using the requirements, as appropriate and limitations with the test methods in Table 5 to this subpart (Table 2 to Subpart UUUUU, Item 1):

<b>Table 2 to Subpart UUUUU of Part 63 – Emission Limits for Existing EGUs</b>				
Item No.	For the following Pollutants...	You must meet the following emission limits and work practice standards...	Using these requirements, as appropriate and limitations with the test methods in Table 5 to this subpart UUUUU...	
1.a	Filterable Particulate Matter (PM)	3.0E-2 lb/MMBtu or 3.0E-1 lb/MWh <sup>2</sup>	Collect a minimum of 1 dscm per run.	
	<b>OR</b>			
	Total non-Hg HAP Metals	5.0E-5 lb/MMBtu or 5.0E-1 lb/GWh	Collect a minimum of 1 dscm per run.	
	<b>OR</b>			
	Individual HAP Metals	Antimony (Sb)	8.0E-1 lb/TBtu or 8.0E-3 lb/GWh	Collect a minimum of 3 dscm per run.
		Arsenic (As)	1.1E0 lb/TBtu or 2.0E-2 lb/GWh	
		Beryllium (Be)	2.0E-1 lb/TBtu or 2.0E-3 lb/GWh	
		Cadmium (Cd)	3.0E-1 lb/TBtu or 3.0E-3 lb/GWh	
		Chromium (Cr)	2.8E0 lb/TBtu or 3.0E-2 lb/GWh	
		Cobalt (Co)	8.0E-1 lb/TBtu or 8.0E-3lb/GWh	
	Lead (Pb)	1.2E0 lb/TBtu or 2.0E-2 lb/GWh		
	Manganese (Mn)	4.0E0 lb/TBtu or 5.0E-2lb/GWh		
	Nickel (Ni)	3.5E0 lb/TBtu or 4.0E-2 lb/GWh		
	Selenium (Se)	5.0E0 lb/TBtu or 6.0E-2 lb/GWh		

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1.b.	Hydrogen chloride (HCL)	2.0E-3 lb/MMBtu or 2.0E-2lb/MWh	For Method 26A at Appendix A-8 to Part 60 of this chapter, collect a minimum of 0.75 dscm per run; For Method 26, collect a minimum of 120 liters per run. For ASTM D6348-03 <sup>3</sup> or Method 320 at Appendix A to Part 63 of this chapter, sample for a minimum of 1 hour.
	<b>OR</b>		
	Sulfur dioxide (SO <sub>2</sub> ) <sup>4</sup>	2.0E-1 lb/MMBtu or 1.5E0 lb/MWh	SO <sub>2</sub> CEMS.
1.c	Mercury (Hg)	1.2E0 lb/TBtu or 1.3E-2 lb/GWh	LEE Testing for 30 days with a sampling period consistent with that given in Section 5.2.1 of Appendix A to this subpart per Method 30B at Appendix A-8 to Part 60 of this chapter run or Hg CEMS or sorbent trap monitoring system only.
		<b>OR</b>	
		1.0E0 lb/TBtu or 1.1E-2 lb/GW	LEE Testing for 90 days with a sampling period consistent with that given in Section 5.2.1 of Appendix A to this subpart per Method 30B run or Hg CEMS or sorbent trap monitoring system only.

Notes: <sup>1</sup> For LEE emissions testing for total PM, total HAP metals, individual HAP metals, HCl, and HF, the required minimum sampling volume must be increased nominally by a factor of two.

<sup>2</sup> Gross output.

<sup>3</sup> Incorporated by Reference, See §63.14.

<sup>4</sup> You may not use the alternate SO<sub>2</sub> limit if your EGU does not have some form of FGD system and SO<sub>2</sub> CEMS installed.

b. If your EGU is an existing EGU you must meet the following:

1. Conduct a tune-up of the EGU burner and combustion controls at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, as specified in §63.10021(e) (Table 3 to Subpart UUUUU, Item 1).

c. If your EGU is a coal-fired EGU during startup, you must meet the following (Table 3 to Subpart UUUUU, Item 3):

1. You have the option of complying using either of the following work practice standards (Table 3 to Subpart UUUUU, Item 3.a):
  - a. If you choose to comply using paragraph (1) of the definition of "startup" in §63.10042, you must operate all CMS during startup. Startup means either the first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on site use). For startup of a unit, you must use clean fuels as defined in §63.10042 for ignition. Once you convert to firing coal, you must engage all of the applicable control technologies except dry scrubber and SCR. You must start your dry scrubber and SCR systems, if present, appropriately to comply with relevant standards applicable during normal operation. You must comply with all applicable emissions limits at all times except for periods that meet the applicable definitions of startup and shutdown in this subpart. You must keep records during

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startup periods. You must provide reports concerning activities and startup periods, as specified in §63.10011(g) and §63.10021(h) and (i) (Table 3 to Subpart UUUUU, Item 3.a.(1)).

- b. If you choose to comply using paragraph (2) of the definition of “startup” in §63.10042, you must operate all CMS during startup. You must also collect appropriate data, and you must calculate the pollutant emission rate for each hour of startup (Table 3 to Subpart UUUUU, Item 3.a.(2)).

For startup of an EGU, you must use one or a combination of the clean fuels defined in §63.10042 to the maximum extent possible, taking into account considerations such as boiler or control device integrity, throughout the startup period. You must have sufficient clean fuel capacity to engage and operate your PM control device within one hour of adding coal to the unit. You must meet the startup period work practice requirements as identified in §63.10020(e) (Table 3 to Subpart UUUUU, Item 3.a.(2)).

Once you start firing coal, you must vent emissions to the main stack(s). You must comply with the applicable emission limits beginning with the hour after startup ends. You must engage and operate your particulate matter control(s) within 1 hour of first firing of coal (Table 3 to Subpart UUUUU, Item 3.a.(2)).

You must start all other applicable control devices as expeditiously as possible, considering safety and manufacturer/supplier recommendations, but, in any case, when necessary to comply with other standards made applicable to the EGU by a permit limit or a rule other than this Subpart that require operation of the control devices (Table 3 to Subpart UUUUU, Item 3.a.(2)).

2. If you choose to use just one set of sorbent traps to demonstrate compliance with the applicable Hg emission limit, you must comply with the limit at all times; otherwise, you must comply with the applicable emission limit at all times except for startup and shutdown periods (Table 3 to Subpart UUUUU, Item 3.c).
  3. You must collect monitoring data during startup periods, as specified in §63.10020(a) and (e). You must keep records during startup periods, as provided in §§63.10032 and 63.10021(h). You must provide reports concerning activities and startup periods, as specified in §§63.10011(g), 63.10021(i), and 63.10031 (Table 3 to Subpart UUUUU, Item 3.d).
- d. If your EGU is a coal-fired EGU during shutdown, you must meet the following (Table 3 to Subpart UUUUU, Item 4):
1. You must operate all CMS during shutdown. You must also collect appropriate data, and you must calculate the pollutant



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emission rate for each hour of shutdown for those pollutants for which a CMS is used. While firing coal during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices and continue to operate those control devices after the cessation of coal being fed into the EGU and for as long as possible thereafter considering operational and safety concerns. In any case, you must operate your controls when necessary to comply with other standards made applicable to the EGU by a permit limit or a rule other than this Subpart and that require operation of the control devices (Table 3 to Subpart UUUUU, Item 4).

If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the clean fuels defined in §63.10042 and must be used to the maximum extent possible, taking into account considerations such as not compromising boiler or control device integrity (Table 3 to Subpart UUUUU, Item 4).

You must comply with all applicable emission limits at all times except during startup periods and shutdown periods at which time you must meet this work practice. You must collect monitoring data during shutdown periods, as specified in §63.10020(a). You must keep records during shutdown periods, as provided in §§63.10032 and 63.10021(h). Any fraction of an hour in which shutdown occurs constitutes a full hour of shutdown. You must provide reports concerning activities and shutdown periods, as specified in §§63.10011(g), 63.10021(i), and 63.10031 (Table 3 to Subpart UUUUU, Item 4).

- ii. §63.9991(c) – You may use the alternate SO<sub>2</sub> limits in Table 2 to this subpart only if your EGU:
  - a. §63.9991(c)(1) - Has a system using wet or dry flue gas desulfurization technology and an SO<sub>2</sub> continuous emissions monitoring system (CEMS) installed on the EGU; and
  - b. §63.9991(c)(2) - At all times, you operate the wet or dry flue gas desulfurization technology and the SO<sub>2</sub> CEMS installed on the EGU consistent with §63.10000(b).

**General Compliance Requirements**

- a. This source is subject to the applicable general compliance requirements as specified in §63.10000.

**Testing and Initial Compliance Requirements**

- a. This source is subject to the applicable testing and initial compliance requirements as specified in §63.10005, §63.10006, §63.10007, §63.10008, §63.10009, §63.10010, and §63.10011.

**Continuous Compliance Requirements**

- a. This source is subject to the applicable continuous compliance requirements as specified in §63.10020, §63.10021, §63.10022, §63.10023.

**Notification, Reports, and Records**



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- a. This source is subject to the applicable notification, reports, and records requirements as specified in §63.10030, §63.10031, §63.10032, §63.10033.
13. This source is subject to the applicable requirements in 40 CFR Part 63, Subpart A “General Provisions”, as adopted by reference in Colorado Regulation No. 8, Part E, Subpart A. These requirements include, but are not limited to the following:
  - a. §63.4 – Prohibited Activities and Circumvention
  - b. §63.5 – Preconstruction Review and Notification Requirements
  - c. §63.8 – Monitoring Requirements
  - d. §63.12 – State Authority and Delegation
14. This source is subject to the Colorado Regulation No. 1, Emission Control Regulations for Particulate Matter for the State of Colorado, Particulate Matter for Fuel Burning Equipment, Colorado Regulation No. 1, Section III.A.1 as follows:
  - a. No owner or operator shall cause or permit to be emitted into the atmosphere from any fuel-burning equipment, particulate matter in the flue gases which exceeds the following. The heat input rates for each boiler shall be the manufacturer’s guaranteed maximum heat input rates.
    - i. 0.1 lbs per 10<sup>6</sup> Btu heat input for fuel burning equipment of greater than 500x10<sup>6</sup> Btu per hour or more (Colorado Regulation No. 1, Section III.A.1.c).
15. This source is subject to the Colorado Regulation No. 1, Emission Control Regulations for Sulfur Dioxide Emissions for the State of Colorado, Sulfur Dioxide Emission Regulations for Existing Sources, Colorado Regulation No. 1, Section VI.A as follows:
  - a. The averaging time for all sulfur dioxide emissions standards shall be a three-hour rolling average (Colorado Regulation No. 1, Section VI.A.1).
  - b. Existing sources of sulfur dioxide shall not emit sulfur dioxide in excess of the following process-specific limitations. The heat input rates shall be the manufacturer’s guaranteed maximum heat input rates.
    - i. 1.2 lbs of sulfur dioxide per million Btu of heat input for units with a heat input from coal or coal-based by-product fuels equal to or greater than 300 million Btu per hour (Colorado Regulation No. 1, Section VI.A.3.a.(ii)).
16. A Continuous Emission Monitoring (CEM) System shall be installed, calibrated, maintained and operated to accurately measure and record opacity, sulfur dioxide (SO<sub>2</sub>) (including diluent gas carbon dioxide (CO<sub>2</sub>) or oxygen (O<sub>2</sub>)), carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and volumetric flow for Drake Unit 7 (Colorado Regulation No. 1, Section IV and 40 CFR Part 75). Each CEMs shall meet the requirements specified in the Title V Operating Permit 95OPEP107.
17. **State-Only Requirement:** This facility is subject to the Colorado Regulation No. 6, Part B, Section VIII, Standards of Performance for Coal-Fired Electric Steam Generating Units, as follows:
  - a. The Hg Budget Units at this facility are currently considered Low Emitters (LEs), since actual emissions from each boiler are no more than 29.0 pounds per year of mercury. LE status for each boiler shall be determined by data collected through the required Hg monitoring

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pursuant to 40 CFR Part 63, Subpart UUUUU (Condition 12) (Colorado Regulation No. 6, Part B, Section VIII.B.10).

- b. The owner or operator of the Hg Budget Units at this facility shall comply with all applicable Hg monitoring and recordkeeping requirements of 40 CFR Part 63, Subpart UUUUU (Condition 12) (Colorado Regulation No. 6, Part B, Section VIII.E.2).
  - c. For the purposes of this Section VIII and in addition to reporting requirements for Hg emissions in 40 CFR Part 63, Subpart UUUUU, the owner or operator shall submit written quarterly reports to the Division within 30 days of the end of each calendar quarter that includes the information specified in Section VIII.E.3. The Hg emissions reporting specified in this Section VIII.E.3 shall be in units of the applicable standard. The quarterly reports required shall include (Colorado Regulation No. 6, Part B, Section VIII.E.3):
    - i. For each Hg Budget Unit that is a Low Emitter, the lbs per year emitted for each calendar quarter and within 30 days of the end of each calendar year, the pounds emitted for the prior calendar year (Colorado Regulation No. 6, Part B, Section VIII.E.3.c.);
    - ii. Hg Budget Unit operating hours for that quarter (Colorado Regulation No. 6, Part B, Section VII.E.3.d.); and
    - iii. If a continuous Hg monitoring system is used to demonstrate compliance with the Hg monitoring and recordkeeping requirements, total and percentage of monitoring system downtime for that quarter (Colorado Regulation No. 6, Part B, Section VIII.E.3.e.).
18. This facility 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 V of the Title V Operating Permit 95OPEP107.
19. This facility is subject to the requirements of Colorado Regulation No. 3, Part F, Regional Haze Limits – Best Available Retrofit Technology (BART) and Reasonable Progress (RP). This facility shall not emit or cause to be emitted nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), or particulate in excess of the following limits:

Unit	Emission Limit (lbs per MMBtu)		
	NO <sub>x</sub>	SO <sub>2</sub>	Particulate
Martin Drake Unit 7 (S007)	0.29 (30-day rolling average)	0.13 (30-day rolling average)	0.03

- a. Compliance Date:
  - i. The source shall demonstrate compliance with the above limits and averaging times from the Division approved compliance schedule as follows:
    - 1.NO<sub>x</sub>: Drake Unit 7 – December 31, 2014
    - 2.SO<sub>2</sub>: Drake Unit 7 – December 31, 2017
    - 3.PM: Drake Unit 7 – November 4, 2013
  - ii. The source must maintain control equipment or operational practices required to comply with the above limits and averaging times, and establish procedures to

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ensure that such equipment or operational practices are properly operated and maintained (Colorado Regulation No. 3, Part F, Section VI.A.3).

b. Monitoring/Compliance Determinations: SO<sub>2</sub> and NO<sub>x</sub> Regional Haze Limits

- i. The owner or operator of the boilers subject to this section shall comply with the Part 75 monitoring and recordkeeping requirements as incorporated by reference into this regulation with the exception of the continuous emission monitoring system (CEMS) data substitution and bias adjustment requirements (Colorado Regulation No. 3, Part F, Section VII.B.1.a).

At all times after the compliance deadline specified in Regulation Number 3, Part F, Section VI.A.3 the owner/operator of each BART 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<sub>2</sub>, NO<sub>x</sub>, diluents, 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<sub>2</sub> and NO<sub>x</sub> 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 (Colorado Regulation No. 3, Part F, Section VII.B.1.a).

In determining compliance with the SO<sub>2</sub> and NO<sub>x</sub> Regional Haze limits, all periods of emissions shall be included, including startups, shutdowns, emergencies, and malfunctions (Colorado Regulation No. 3, Part F, Section VII.B.1.a).

1. For any hour in which fuel is combusted in the BART unit, the owner/operator shall calculate hourly average SO<sub>2</sub> and NO<sub>x</sub> 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. 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).):

- a. 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)).

"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 (Colorado Regulation No. 3, Part F, Section VII.A.4).

c. Monitoring/Compliance Determinations: Particulate Regional Haze Limits

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- i. Unless particulate compliance testing was completed within the previous 6 months, within 60 days of the compliance deadline specified in Regulation Number 3, Part F, Section VI.A.3. 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 be based on the average of the three test runs (Colorado Regulation No. 3, Part F, Section VII.C.1).

In addition, to the stack tests described above, 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.1).

The compliance assurance monitoring (CAM) plan specified above does not apply until after the CAM plan has been established in a renewal Operating Permit 95OPEP107.

d. Recordkeeping and Reporting Requirements

- i. The owner/operator shall maintain the following records for at least five (5) years (Colorado Regulation No. 3, Part F, Section VII.D):
  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).

The CAM Plan data requirement specified above does not apply until after the CAM plan has been established in the renewal Operating Permit 95OPEP107.

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).
3. Any other records required by 40 CFR parts 60, Subpart F, Section 60.65, 63, Subpart LLL, 64 or 75 (Colorado Regulation No. 3, Part F, Section VII.D.3).

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- ii. The owner/operator of a BART 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).

The owner/operator of a BART 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).

### **OPERATING & MAINTENANCE REQUIREMENTS**

20. The owner or operator shall develop an operating and maintenance (O&M) plan for the FGD, along with a recordkeeping format, that outlines how the applicant will maintain compliance on an ongoing basis with the requirements of this permit. **Compliance with the O&M plan shall commence at permit issuance.** Within one hundred and eighty days (180) after permit issuance, the owner or operator shall submit the O&M plan to the Division. Failure to submit an acceptable operating and maintenance plan could result in revocation of the permit. Note that the Division may modify the monitoring requirements as part of the Title V Operating Permit if this facility is subject to Title V permitting (Reference: Regulation Number 3, Part B, III.E.).

### **COMPLIANCE TESTING AND SAMPLING**

#### **Periodic Testing Requirements**

21. The owner or operator 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 Monitoring (COM) Systems shall be used to monitor compliance with Conditions 9 and 10. The requirements for the COMs are defined in the Title V Operating Permit 95OPEP107.
22. The owner or operator shall monitor compliance with the Colorado Regulation No. 1, Section III.A.1 requirements in Condition 14 as defined in the Title V Operating Permit 95OPEP107.
23. The owner or operator shall monitor compliance with the Colorado Regulation No. 1, Section VI.A.3 requirements in Condition 15 as defined in the Title V Operating Permit 95OPEP107.
24. A compliance test shall be conducted on Drake Unit 7 to measure the emission rates of PM and PM<sub>10</sub> in order to monitor compliance with the Colorado Regulation No. 1 particulate limits found in Condition 14. Testing shall be performed using the appropriate EPA Reference Methods to measure filterable particulate matter. Testing shall be conducted as described below:
  - a. If the most recent test 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;
  - b. If the most recent test 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;

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- c. If the most recent test or any subsequent test results indicate emissions are greater than 75% of the emission limit, tests are required every twelve (12) months until the provisions of (1) or (2) are met.

Please note the last stack test for particulate matter emissions on Drake Unit 7 took place on May 21-23, 2013. The test results for the May 21-23, 2013 stack test for Drake Unit 7 indicated that emissions were less than or equal to 50% of the emission limitation.

The test protocol, test, and test report must be in accordance with the requirements of the APCD Compliance Test Manual (<https://www.colorado.gov/pacific/cdphe/inspections-and-enforcement>). A stack testing protocol shall be submitted for Division approval at least forty-five (45) calendar days prior to any performance of the test required under this condition. No stack test required herein shall be performed without prior 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 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.

### **ADDITIONAL REQUIREMENTS**

25. The owner or operator shall submit a cancelation notice to the Division for Drake Unit 5, AIRS ID: 041-0004-004 no later than December 31, 2016 with shutdown on or before January 1, 2017.
26. All previous versions of this permit are cancelled upon issuance of this permit.
27. A Revised Air Pollutant Emission Notice (APEN) shall be filed: (Reference: Regulation Number 3, Part A, II.C.)
  - a. Annually whenever a significant increase in emissions occurs as follows:

**For any criteria pollutant:**

For sources emitting **less than 100 tons per year**, a change in actual emissions of five tons per year or more, above the level reported on the last APEN submitted; or

For volatile organic compounds (VOC) and nitrogen oxide (NOx) sources in an ozone non-attainment area emitting **less than 100 tons of VOC or nitrogen oxide per year**, a change in actual emissions of one ton per year or more or five percent, whichever is greater, above the level reported on the last APEN submitted; or

For sources emitting **100 tons per year or more of a criteria pollutant**, a change in actual emissions of five percent or 50 tons per year or more, whichever is less, above the level reported on the last APEN submitted; or

For sources emitting **any amount of lead**, a change in actual emissions, above the level reported on the last APEN submitted, of fifty (50) pounds of lead



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**For any non-criteria reportable pollutant:**

If the emissions increase by 50% or five (5) tons per year, whichever is less, above the level reported on the last APEN submitted to the Division.

- b. Whenever there is a change in the owner or operator of any facility, process, or activity; or
  - c. Whenever new control equipment is installed, or whenever a different type of control equipment replaces an existing type of control equipment; or
  - d. Whenever a permit limitation must be modified; or
  - e. No later than 30 days before the existing APEN expires.
28. All equipment currently covered by an existing Title V permit must comply with all monitoring, reporting, and record keeping requirements outlined in the current Title V Operating Permit. (Reference: Regulation Number 3, Part B III.E.)
29. This source is subject to the provisions of Regulation Number 3, Part C, Operating Permits (Title V of the 1990 Federal Clean Air Act Amendments). The provisions of this construction permit must be incorporated into the operating permit. The application for the modification to the Operating Permit is due within one year of the issuance of this permit.

**GENERAL TERMS AND CONDITIONS:**

30. This permit and any attachments must be retained and made available for inspection upon request. The permit may be reissued to a new owner by the Division as provided in Regulation Number 3, Part B, II.B upon a request for transfer of ownership and the submittal of a revised APEN and the required fee.
31. If this permit specifically states that final approval has been granted, then the remainder of this condition is not applicable. Otherwise, the issuance of this construction permit is considered initial approval and does not provide "final" approval for this activity or operation of this source. Final approval of the permit must be secured from the APCD in writing in accordance with the provisions of 25-7-114.5(12)(a) C.R.S. and AQCC Regulation Number 3, Part B, III.G. Final approval cannot be granted until the operation or activity commences and has been verified by the APCD as conforming in all respects with the conditions of the permit. Once self-certification of all points has been reviewed and approved by the Division, it will provide written documentation of such final approval. **Details for obtaining final approval to operate are located in the Requirements to Self-Certify for Final Approval section of this permit.** The operator shall retain the permit final approval letter issued by the Division after completion of self-certification with the most current construction permit.
32. This permit is issued in reliance upon the accuracy and completeness of information supplied by the applicant and is conditioned upon conduct of the activity, or construction, installation and operation of the source, in accordance with this information and with representations made by the applicant or applicant's agents. It is valid only for the equipment and operations or activity specifically identified on the permit. (Reference: Regulation Number 3, Part B III.E.)



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By: 

Danielle Walker  
Title V Permit Engineer

By: 

Matthew S. Burgett, P.E.  
Title V Operating Permit Unit Supervisor

### Permit History

Issuance	Date	Description
Issuance #1	December 13, 1973	Issued to Department of Public Utilities, Martin Drake Power Plant Initial Permit to Operate Unit 7
Issuance #2	This Issuance	Issued to Colorado Springs Utilities – Martin Drake Power Plant Permit to incorporate a facility wide sulfur dioxide (SO <sub>2</sub> ) emission limitation as required by 40 CFR Part 51, Subpart BB, Data Requirements Rule for the 2010 1-hour Sulfur Dioxide (SO <sub>2</sub> ) Primary National Ambient Air Quality Standard (NAAQS), the 40 CFR Part 63, Subpart UUUUU requirements, and Colorado Regulation No. 6, Part B, Section VIII requirements.

### Notes to Permit Holder:

- 1) The production or raw material processing limits and emission limits contained in this permit are based on the production/processing rates requested in the permit application. These limits may be revised upon request of the permittee providing there is no exceedance of any specific emission control regulation or any ambient air quality standard. A revised air pollutant emission notice (APEN) and application form must be submitted with a request for a permit revision. (Reference: Regulation Number 3, Part B II.A.4.)
- 2) This source is subject to the Common Provisions Regulation Part II, Subpart E, Affirmative Defense Provision for Excess Emissions During Malfunctions. The permittee shall notify the Division of any malfunction condition which causes a violation of any emission limit or limits stated in this permit as soon as possible, but no later than noon of the next working day, followed by written notice to the Division addressing all of the criteria set forth in Part II.E.1. of the Common Provisions Regulation. See: <https://www.colorado.gov/pacific/cdphe/aqcc-reg>.
- 3) In accordance with C.R.S. 25-7-114.1, each Air Pollutant Emission Notice (APEN) associated with this permit is valid for a term of five years from the date it was received by the Division. A revised APEN shall be submitted no later than 30 days before the five-year term expires. Please refer to the most recent annual fee invoice to determine the APEN expiration date for each emissions point associated with this permit. For any questions regarding a specific expiration date call the Division at (303)-692-3150.
- 4) This facility is classified as follows:

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Applicable Requirement	Status
Operating Permit	Major Source CO, NO <sub>x</sub> , SO <sub>2</sub> , PM, PM <sub>10</sub>
PSD	Major Stationary Source CO, NO <sub>x</sub> , SO <sub>2</sub> , PM, PM <sub>10</sub>

- 5) Full text of the Title 40, Protection of Environment Electronic Code of Federal Regulations can be found at the website listed below:

<http://ecfr.gpoaccess.gov/>

Part 60: Standards of Performance for New Stationary Sources		
MACT	63.9980-63.10042	Subpart UUUUU

- 6) The permit holder is required to pay fees for the processing time for this permit. An invoice for these fees will be issued after the permit is issued. Failure to pay the invoice will result in revocation of this permit. The permit holder shall pay the invoice within 30 days of receipt of the invoice (Reference: Regulation Number 3, Part A, VI.B.).
- 7) Unless specifically stated otherwise, the general and specific conditions contained in this permit have been determined by the Division to be necessary to assure compliance with the provisions of Section 25-7-114.5(7)(a), C.R.S.
- 8) Each and every condition of this permit is a material part hereof and is not severable. Any challenge to or appeal of a condition hereof shall constitute a rejection of the entire permit and upon such occurrence, this permit shall be deemed denied *ab initio*. This permit may be revoked at any time prior to self-certification and final authorization by the Division on grounds set forth in the Colorado Air Pollution Prevention and Control Act and regulations of the AQCC including failure to meet any express term or condition of the permit. If the Division denies a permit, conditions imposed upon a permit are contested by the applicant, or the Division revokes a permit, the applicant or owner or operator of a source may request a hearing before the AQCC for review of the Division's action. (Reference: Regulation Number 3, Part B III.F.)
- 9) Section 25-7-114.7(2)(a), C.R.S. requires that all sources required to file an Air Pollutant Emission Notice (APEN) must **pay an annual emission fee**. If a source or activity is to be discontinued, the owner must notify the Division in writing requesting a cancellation of the permit. Upon notification, annual fee billing will terminate.
- 10) Violation of the terms of a permit or of the provisions of the Colorado Air Pollution Prevention and Control Act or the regulations of the AQCC may result in administrative, civil or criminal enforcement actions under Sections 25-7-115 (enforcement), -121 (injunctions), -122 (civil penalties), -122.1 (criminal penalties), C.R.S.

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### Appendix A

#### Martin Drake Power Plant Mechanical Coal Sampling Plan October 2006

At this facility a stand-alone mechanical sampling module is used to collect coal samples. The mechanical coal sampling system is located approximately one-third the way up on belt conveyor three (BC-3). BC-3 transfers crushed coal from the crushing facility in the reclaim system to the final crushing and pulverizing process in the plant.

Samples are taken automatically when the conveyor system is running. Currently, the procedures for collecting the samples are based on the ASTM Method D 2234/D 2234M-03 – Standard Practice for Collection of a Gross Sample of Coal. Adhering to this sampling method provides a representative sample of the coal being consumed.

The samples are collected daily and prepared in accordance with current ASTM standards. After processing, the samples are weighed, marked, and sealed in airtight bags. The samples are then transported to the Springs Utilities Fuels Lab at the Ray D. Nixon Power Plant for analysis.

The coal is analyzed according to current ASTM – approved methods by either the CSU fuels laboratory or else an outside contract laboratory. In the event that an outside laboratory is used, the laboratory's analysis report must indicate what ASTM Method was used for analysis.

Industry standard chain of custody procedures shall be used to track any samples sent to an outside laboratory. Chain of custody records do not need to be used when all sample handling and analysis is conducted by CSU personnel.

At a minimum, the parameters to be analyzed for as-burned coal samples are as follows:

- Fuel Heating Value (higher heating value basis, Btu/lb)
- Fuel Ash Content (%<sub>w</sub> ash)

Inspections and calibrations of the mechanical sampler will be based on ASTM Method ASTM D4702-06 – Standard Practice for Quality Management of Mechanical Coal Sampling Systems. The inspection guidelines stated within this method will address the quality assurance criteria for operating the mechanical coal sampling system in accordance with ASTM Method D 2234/D 2234M. In addition, calibration of the cutter speeds, inspection of the sampling equipment and preventive maintenance on the equipment is performed on a quarterly basis.