MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT

Air, Energy & Mining Division
1520 E. Sixth Avenue
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Helena, Montana 59620-0901

Rocky Mountain Power, LLC
Hardin Generating Station
Northwest ¼ of Section 12, Township 1 South, Range 33 East, in Big Horn County, MT
103 N. Washington St.
Easton, MD 20601

The following table summarizes the air quality programs testing, monitoring, and reporting requirements applicable to this facility.

Facility Compliance Requirements	Yes	No	Comments
Source Tests Required	X		Including Methods 5, 6, 7, 8, 9, 10, 18, 25, 26A, 201A, 202
Ambient Monitoring Required		X	
COMS Required	X		Opacity: PC-Boiler Operations
CEMS Required	X		NO_x, SO_x, CO, and O_2 or CO_2: PC-Boiler Operations
Mercury Emissions Monitoring System (MEMS) Required	X		OP3185-05, Appendix G
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		As Applicable
Monthly Reporting Required		X	
Quarterly Reporting Required	X		As Applicable
Applicable Air Quality Programs			
ARM Subchapter 7 Montana Air Quality Permits (MAQP)	X		MAQP #3185-06
New Source Performance Standards (NSPS)	X		40 CFR 60, Subpart A, Subpart Da, and Subpart Y
National Emission Standards for Hazardous Air Pollutants (NESHAPS)		X	Except for 40 CFR 61, Subpart M
Maximum Achievable Control Technology (MACT)	X		40 CFR 63, Subpart UUUUU
Major New Source Review (NSR) – includes Prevention of Significant Deterioration (PSD) and/or Non-attainment Area (NAA) NSR	X		

Facility Compliance Requirements	Yes	No	Comments
Risk Management Plan Required		X	
Acid Rain Title IV	X		40 CFR Part 72 through Part 75
Compliance Assurance Monitoring (CAM)	X		Appendix H
State Implementation Plan (SIP)	X		General State SIP

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SECTION I. GENERAL INFORMATION

A. Purpose

This document establishes the basis for the decisions made regarding the applicable requirements, monitoring plan, and compliance status of emission units affected by the operating permit proposed for this facility. The document is intended for reference during review of the proposed permit by the U.S. Environmental Protection Agency (EPA) and the public. It is also intended to provide background information not included in the operating permit and to document issues that may become important during modifications or renewals of the permit. Conclusions in this document are based on information provided in the original application submitted by Rocky Mountain Power, Inc. (RMPI) on January 31, 2002, and additional submittals by RMPI and Rocky Mountain Power, LLC (RMP) on October 15, 2003; April 30, 2004; August 17, 2004; October 4, 2004; December 20, 2005; July 26, 2007; August 6, 2007; August 28, 2007; October 5, 2007; June 13, 2008; July 16, 2008; December 22, 2008; March 31, 2009; April 16, 2009; August 21, 2009; October 27, 2009; December 23, 2009; and March 2, 2010; a renewal application submitted on December 10, 2012 with additional information submitted on March 5, 2013; September 11, 2013; October 23, 2013; April 21, 2014 and April 25, 2014; a renewal application submitted on April 22, 2019.

B. Facility Location

The RMP facility is located approximately 1.2 miles northeast of the town of Hardin in the Northwest ¼ of Section 12, Township 1 South, Range 33 East, in Big Horn County, Montana.

C. Facility Background Information

RMP operates a nominal 116-gross megawatt (MW) coal-fired electrical power generation facility approximately 1.2 miles northeast of Hardin, Montana. The facility consists of a pulverized coal-fired boiler (PC-Boiler) and a steam turbine, which drives a 135 MVA class nameplate electric generator to produce a nominal 116-gross MW of electric power (approximately 11-MW of the power produced is used for plant auxiliary power). Other equipment includes a cooling tower, a temporary auxiliary boiler, and associated material handling and storage systems for coal, lime, ash, and activated carbon/sorbent injection.

Montana Air Quality Permit History

On June 11, 2002, **Montana Air Quality Permit (MAQP) #3185-00** was issued to RMPI to construct a 113-MW electrical power generation facility approximately 1.2 miles northeast of Hardin, Montana. The facility would consist of a PC-boiler and a steam turbine, which would drive an electric generator to produce a nominal 113-MW of electric power (8.5-MW of the power produced would be used by RMP).

On November 29, 2003, **MAQP #3185-01** was issued to allow RMPI to move the plant location by 610 meters, 10 degrees clockwise from North; reduce the sulfur dioxide (SO_2) emission rate limit; reduce the boiler stack height; correct boiler exhaust temperature; add hydrogen chloride (HCl) and hydrogen fluoride (HF) emission limits; and include short term emission limits for SO_2. The legal description of the facility's location would remain the same except it will be in the Northwest ¼ of Section 12 rather than the Southwest ¼ of Section 12. The location of all buildings, property boundaries, and emission sources would remain unchanged relative to each other. The boiler stack height was changed from the previously permitted level of no less than 350 feet to at least 250 feet above ground level. The boiler exhaust temperature was assumed to

be 325 degrees Fahrenheit (º F) in Permit Application #3185-00, but would actually be approximately 160º F. The permit was amended to include enforceable limits on HCl and HF emissions to ensure that the Hardin facility remained an area source (as opposed to a major source) with respect to Hazardous Air Pollutants (HAPs). In addition, short-term limits on SO_2 were included in the permit to protect short-term ambient air quality standards and increments. No emission increases would result from the amendment, however, RMPI provided modeling to support the facility move, stack height change, and boiler exhaust temperature correction. MAQP #3185-01 replaced MAQP #3185-00.

On May 16, 2005, **MAQP #3185-02** was issued to RMPI for proposed modifications to the existing facility. On April 30, 2004, the Department of Environmental Quality-Air Resources Management Bureau (Department) received a permit application from RMPI, requesting a change in the permitted control equipment on the PC-Boiler for SO_2 and particulate matter with an aerodynamic diameter less than 10 micrometers (PM_{10}) emissions and changes in the facility's material handling systems, cooling system, and plant layout. The previously permitted system for SO_2 and PM_{10} emissions included a wet Venturi scrubber operated in conjunction with a multiclone. RMPI proposed replacement of the system with a lime spray-dryer absorber (SDA) followed by a fabric filter baghouse (FFB). Changes in the cooling system and consequential increases in potential PM_{10} emissions triggered review under the New Source Review Prevention of Significant Deterioration (PSD) of Air Quality program. The increased emissions resulted in a potential increase in the level of total dissolved solids (TDS) in the cooling system feed water, a more accurate water balance (which minimizes the amount of water discharged to evaporation ponds), and the previously overestimated cooling tower mist eliminator control efficiency, which could not be guaranteed in the previous configuration. In addition, RMPI requested to correct the applicable HF limit that was established under MAQP #3185-01. Previously established limits associated with oxides of nitrogen (NO_x), carbon monoxide (CO), and Volatile Organic Compound (VOC) emissions from the Boiler were not reviewed in this action because the proposed modifications would not affect them. The application was deemed complete on October 4, 2004.

In response to comments received on the Department's Preliminary Determination (PD) on MAQP #3185-02, several emission limits changed: SO_2 from 0.12 pounds per million British Thermal Units (lb/MMBtu) on a rolling 30-day average to 0.11 lb/MMBtu on a rolling 30-day average, filterable particulate matter (PM)/PM_{10} from 0.015 lb/MMBtu to 0.012 lb/MMBtu, and mercury (Hg) from 3.54 lb per trillion Btu (lb/TBtu) to 5.8 lb/TBtu with a testing plan to evaluate the feasibility of lowering that limit. In addition, a total PM/PM_{10} limit (that includes filterable and condensable fractions) was added. Additional discussion regarding these changes was included in Section III – Best Available Control Technology (BACT) Determination, of the Department's Decision (DD) on this permit.

The DD on MAQP #3185-02 was appealed to the Montana Board of Environmental Review (BER) by RMPI, the Montana Environmental Information Center, William J. Eggers III, Margaret J. S. Eggers, and Tracy Small. A settlement agreement was signed by all parties (including the Department) and approved in a BER order signed on May 6, 2005. The order included the following changes (in summary):

- Clarification that if water is used for dust suppression on unpaved portions of access roads, parking lots, and general plant area only clear, non-oily water that contains no regulated hazardous waste shall be used.

- 18-month optimization periods for SO_2 and PM_{10} during which temporary emission limits would apply. Following the 18-month optimization periods, the SO_2 (including control

efficiencies) and PM_{10} limits would revert back to the BACT limits established in the DD of MAQP #3185-02. Through a permit application, RMPI was allowed to demonstrate to the Department that other limits would be appropriate using information from the optimization periods.

- A 36-month demonstration period for Hg emissions during which RMPI would make the Hardin facility available as a test facility for Hg controls. By the end of that 36-month demonstration period, RMPI would install and operate an activated carbon injection system or equivalent technology for Hg control. An 18-month optimization period for the Hg control system would follow. Prior to the end of the 18-month optimization period, RMPI would submit an application to the Department with information from that Hg optimization period to determine an appropriate Hg BACT emissions limit.

In addition, in an unrelated action, the Department changed the rule reference on the requirement in the permit to comply with 40 Code of Federal Regulations (CFR) 60, Subpart Da from the Administrative Rules of Montana (ARM) 17.8.749 to ARM 17.8.340 and 40 CFR 60, Subpart Da. The change reflected information provided by RMPI (that was not available prior to the issuance of the DD) that reconstruction as defined under 40 CFR 60.15 had occurred for the PC-Boiler. This change was not a substantive change, and was made for convenience purposes. MAQP #3185-02 replaced MAQP #3185-01.

On December 20, 2005, the Department received a complete permit application from RMPI to add a temporary auxiliary 11.8 MMBtu/hr boiler necessary for startup of the PC-boiler. The temporary auxiliary boiler would provide supplemental heat when the PC-boiler is operating on natural gas for activities such as steam blows or freeze protection during tuning or startup of the Boiler. Once startup has progressed to the point that the PC-Boiler is fired on coal, there will be no need for the auxiliary boiler. The auxiliary boiler would not be operated at the same time the PC-boiler is combusting coal, therefore overall potential emissions at the facility would not increase. **MAQP #3185-03** replaced MAQP #3185-02.

On March 16, 2007, RMPI submitted an application for a modification to MAQP #3185-03. The application was deemed complete on August 3, 2007, upon RMPI's submittal of additional information. Specifically, RMPI requested the following actions: 1) specify that the current SO_2 short-term emission limit of 182.6 pounds per hour (lb/hr) does not apply during periods of PC-Boiler startup and shutdown and during SDA atomizer change-outs; 2) establish an alternate SO_2 short-term emission limit for periods of PC-Boiler startup and shutdown and SDA atomizer change-outs; 3) define startup, shutdown, and SDA atomizer change-out periods and establish any related conditions; 4) request that the optimization period requirement for PC-Boiler SO_2 emissions control efficiency be established as a permanent MAQP condition; and 5) replace the temporary PM/PM_{10} and SO_2 emission limits established to apply during a defined optimization period with the post-optimization-period limits expressed in MAQP #3185-03.

In addition, on June 26, 2007, RMPI notified the Department of a pending merger with and into Rocky Mountain Power, Inc. (a Delaware Company (RMPD)) and RMPD's intent to transfer MAQP #3185-03 to RMP upon closing. On August 3, 2007, the Department received notification that the merger had closed. Therefore, the current permit action also transfers the MAQP from RMPI to RMP.

Further, the Department placed a 3-hour SO_2 limit on the PC-Boiler stack to minimize visibility impacts, which also reduced impacts to the 3-hour SO_2 increment. The Department based the proposed 3-hour limit on RMP's past operating data.

Lastly, while RMP is subject to the applicable requirements of the Acid Rain Program contained in 40 CFR 72-78, the program is implemented under Title V of the Federal Clean Air Act. Therefore, the Department removed the condition requiring RMP to comply with the Acid Rain Program from the MAQP (ARM 17.8, Subchapter 8). Removing the requirement does not alleviate RMP from the responsibility of complying with the program and the requirement will be included in RMP's Title V Operating Permit (ARM 17.8, Subchapter 12), upon issuance. Removing the requirement for RMP to comply with the acid rain program simply clarifies that the Department's authority to implement the acid rain program is contained in ARM 17.8, Subchapter 12 (Title V Operating Permit Program). In addition, the monitoring requirements contained in 40 CFR 72-78 remain as applicable requirements in the MAQP. **MAQP #3185-04** replaced MAQP #3185-03.

On December 22, 2008 and April 16, 2009, the Department received application materials from RMP proposing to modify MAQP #3185-04. The modification proposed to establish an Hg emission limit for the HGS pursuant to ARM 17.8.771, and to provide an analysis of potential mercury control options including, but not limited to, boiler technology, mercury emission control technology, and any other mercury control practices. The application also included a proposed mercury emission control strategy. Additionally, RMP provided information relevant to, and requested that MAQP #3185-05 establish emission limitations and requirements satisfying, the Hardin Generating Station Settlement Agreement (Settlement Agreement) signed by the BER on May 6, 2005. The information provided described the results of the Hg Demonstration Period and Hg Optimization Period efforts required by the Settlement Agreement in order to establish a numeric Hg emission limitation based on performance of the BACT derived Activated Carbon Injection (ACI) base technology controls, in conjunction with the control system optimization efforts. Optimization testing and analysis to establish the BACT limit included co-benefit testing analysis of coal blending and coal additives as well as testing and analysis of injection of multiple activated carbon based commercially available engineered Hg sorbents into the exhaust stream after the air heater. Finally, RMP provided an analysis of effects of operation of the mercury control system on the performance of the permitted SO_2 and PM/PM_{10} emission control equipment.

MAQP #3185-05 established a BACT Hg emission limit based upon demonstrated performance during the Hg Optimization Period pursuant to the Settlement Agreement and an Hg emission limitation and associated operating requirements for the HGS to comply with ARM 17.8.771. Also, MAQP #3185-05 established the requirements for an Hg compliance monitoring plan pursuant to applicable rules and the Settlement Agreement. Finally, this permit action updated rule references, permit format, and the emissions inventory. **MAQP #3185-05** replaced MAQP #3185-04.

On October 27, 2008 and December 23, 2009, the Department received application material from RMP proposing to modify MAQP #3185-05. The modification proposed to revise the duration of the BACT CO emission limit (Section II.C.1) from an hourly average originally established in MAQP #3185-00 to a 30-day rolling average. RMP also requested to substitute use of CO continuous emission monitoring system (CEMS) data as the compliance demonstration method for the CO emission limit, in lieu of existing biannual source testing requirements. Finally, RMP requested MAQP #3185-05 be modified such that RMP is required to install, calibrate, operate and maintain a CO CEMS on the PC-Boiler stack.

MAQP #3185-06 was issued on March 2, 2010 and established a revised BACT CO emission limit (MAQP #3185-06, Section II.C.1) based on the demonstrated performance of the boiler while employing the control strategy established as BACT in the original permitting action. The revised permit limit allows for accommodation of periods of higher CO emissions during start-

up and shut-down. As such, for continuity purposes and to maintain consistence with other pollutant testing and compliance demonstration requirements, Sections II.G.2 and II.I.1.g of MAQP #3185-06 were also modified/added as requested by RMP. **MAQP #3185-06** replaced MAQP #3185-05.

Title V Operating Permit History

On January 31, 2002, an application was submitted to operate a nominal 116-gross megawatt (MW) coal-fired electrical power generation facility approximately 1.2 miles northeast of Hardin, Montana. The permit application was assigned **Operating Permit #OP3185-00.** Operating Permit #OP3185-00 was issued final and effective on June 14, 2008.

RMP submitted a request to amend Operating Permit #OP3185-00 on June 13, 2008. Additional information with respect to this request was submitted on July 16, 2008. In general, RMP requested that the Department amend Operating Permit #OP3185-00 to include additional time to comply with installation, calibration, and operation of the CO CEMS due to the fact that the manufacturer could not install the equipment and calibrate it within the previous deadline of 180 days as established in Operating Permit #OP3185-00. In addition, RMP requested that the Department clarify language in Section B.I.10 of the general conditions with respect to quarterly reporting of excess SO_2 emissions, and to correct a typographical error in Appendix F. **Operating Permit #OP3185-01** replaced Operating Permit #OP3185-00.

On December 22, 2008, and April 16, 2009, RMP sent application materials to the Department requesting a modification to Operating Permit #OP3185-01 to include mercury emission limitations under ARM 17.8.771 and ARM17.8.752. The mercury control rule is implemented through the MAQP program and required that RMP modify its MAQP to establish a mercury emission limit and associated operating requirements for the boiler. On July 16, 2009, the Department issued MAQP #3185-05 with mercury limits and operating requirements.

On July 11, 2008, RMP sent a letter to the Department requesting that Douglas Halliday be designated as the Responsible Official and Dan Dunlap as Facility Contact. On March 31, 2009, RMP sent a letter requesting Richard Olsen replace Martin Wenzel as Alternate Designated Representative. Finally, on August 20, 2009, the Department received correspondence requesting Gary Arneson also be added as Facility Contact (for the Hardin plant site).

Operating Permit #OP3185-01 was updated to reflect the mercury control requirements in the current MAQP and the new Responsible Official, Alternate Designated Representative and Facility Contacts. **Operating Permit #OP3185-02** replaced Operating Permit #OP3185-01.

On March 2, 2010, RMP submitted a modification application for Operating Permit #OP3185-02. The modification to Operating Permit #OP3185-02 was to reflect the revised BACT limits for CO to be consistent with that finalized in MAQP #3185-06. Operating Permit #OP3185-03 updated the CO BACT limits to be consistent with those in the current MAQP. **Operating Permit #OP3185-03** replaced Operating Permit #OP3185-02.

On December 12, 2012 the Department received an application for renewal This permit action added the required Compliance Assurance Monitoring (CAM) plan, removed a temporary auxiliary boiler, and made changes to the startup/shutdown procedures. Additionally, the language and rule references were updated to currently used permit language and rule references used by the Department. **Operating Permit #OP3185-04** replaced Operating Permit #OP3185-03.

D. Current Permit Action

On April 22, 2019, the Department received an Operating Permit renewal application. This application was submitted with a PM and PM_{10} BACT analysis for the PC-Boiler. The Department sent correspondence to RMP on April 23, 2019 that explained the requirements for a modification of a BACT limit. An update to a BACT emission limit must be submitted and reviewed under ARM 17.8 Subchapter 7, and incorporated into MAQP #3185-06 before being incorporated in the Operating Permit. RMP did not submit an MAQP modification prior to the draft of Operating Permit #OP3185-05, therefore this permit does not contain updated PM and PM_{10} BACT limits. **Operating Permit #OP3185-05** replaces Operating Permit #OP3185-04.

E. Taking and Damaging Analysis

HB 311, the Montana Private Property Assessment Act, requires analysis of every proposed state agency administrative rule, policy, permit condition or permit denial, pertaining to an environmental matter, to determine whether the state action constitutes a taking or damaging of private real property that requires compensation under the Montana or U.S. Constitution. As part of issuing an operating permit, the Department is required to complete a Taking and Damaging Checklist. As required by 2-10-101 through 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
x		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	x	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	x	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	x	4. Does the action deprive the owner of all economically viable uses of the property?
	x	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	x	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	x	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	x	7a. Is the impact of government action direct, peculiar, and significant?
	x	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	x	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	x	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

F. Compliance Designation

The most recent Full Compliance Evaluation (FCE) and Inspection at the RMP Hardin Generating Station was finalized on April 19, 2018. The FCE covered an evaluation period from January 31, 2016 to April 19, 2018. Based on the information gathered and observations made during the inspection, and review of reports and compliance certifications submitted by RMP during the review period, the Department found RMP to be in compliance with the applicable air quality requirements.

On February 14, 2020, the Department sent Warning Letter #WL-20200213-00358 to RMP for violation of the ARM – Mercury Emission Standards for Mercury-Emitting Generating Units. RMP is a mercury-emitting generating unit per ARM 17.8.740(12) and 17.8.771. ARM 17.8.771(9) requires that no later than ten years after the issuance of the permit containing the mercury emission limit, and every ten years thereafter, the owner or operator of a mercury-emitting generating unit, for which DEQ has established a mercury emission limit under ARM 17.8.771(1)(b) or (8), shall file an application with DEQ for an MAQP or a modification of an MAQP for the mercury-emitting generating unit to establish a revised mercury emission limit. The owner or operator shall submit, as part of the application, the information required in ARM 17.8.771(3)(b)(i) through (iv), a BACT analysis for the control of mercury emissions, and a review of the mercury-emitting generating units existing mercury emission limit and the mercury control strategy, including associated mercury emission monitoring and operational data.

RMP's Hardin Generating Station's mercury BACT was established in MAQP #3185-05, issued July 16, 2009. On February 26, 2019, the Department issued a letter reminding RMP that an MAQP modification application containing a revised mercury BACT was due to be submitted by July 16, 2019. On October 4, 2019, RMP submitted to the Department a letter containing a mercury BACT analysis but it was not submitted as part of an MAQP application, and was not submitted within ten years from the date of issuance of the permit, each of which are required by ARM 17.8.771(9).

As of the draft date of #OP3185-05, RMP had not submitted an MAQP modification application to renew the Hardin Generating Station's mercury BACT.

SECTION II. SUMMARY OF EMISSION UNITS

A. Facility Process Description

RMP operates a nominal 116 MW electrical power generation facility approximately 1.2 miles northeast of Hardin, Montana. The facility consists of a pulverized coal-fired (PC-boiler) boiler and a steam turbine, which drives a 135 MVA class nameplate electric generator to produce a nominal 116-gross MW of electric power (11-MW of the power produced will be used on average by RMP for plant auxiliary power), and associated equipment. The following equipment is permitted for this facility:

1. 1,304 MMBtu/hr PC-Boiler (with associated steam turbine and electric generator) with a 250-foot stack.

   The permitted boiler is a 1968 wet-bottom, wall-fired boiler manufactured by Mitchell of the United Kingdom. The boiler is configured with 3 pulverizers and 12 burners with opposed firing. The maximum nominal heat input rate to the boiler will be 1,304 MMBtu/hr, which produces up to approximately 900,000 pounds of steam per hour. Natural gas is used to fire the boiler during periods of start-up. During normal operations, the boiler is fueled with pulverized coal.

   Boiler combustion gases (flue gases) are routed to a Selective Catalytic Reduction (SCR) unit for control of NO_X. From the SCR unit, the flue gases are routed to a dry flue gas desulfurization (FGD) system (specifically characterized as a SDA) that uses a lime reagent for control of SO_2. Other acid gases including sulfuric acid (H_2SO_4), HCl and HF, and ionic Hg are removed as a co-benefit control. Primary Hg control is achieved by injection of activated carbon/sorbent into the flue gas after the air heater. Mercury is oxidized, sorbed to the injectate, and finally removed from the flue gas by the FFB. The FFB is located downstream of the SDA for PM control. Additional pollutants such as Hg, trace metals, and radionuclides are also be removed as a co-benefit control if present in the particulate form. From the FFB, the flue gas exit to the atmosphere.

2. Cooling tower

   A wet cooling tower is used to dissipate the heat from the steam turbine using the latent heat of water vaporization to exchange heat between the process and the air passing through the cooling tower. The proposed cooling tower is induced, counter flow draft design equipped with cellular (honeycomb) drift eliminators. The maximum make-up water rate for the proposed cooling tower is approximately 1,400 gallons per minute (gpm) and water comes from the Bighorn River. There is no direct discharge to the state waters from the operation of this cooling tower. Blow-down is treated to maximize water recovery. Treatment includes a reverse osmosis unit followed by a condensate polisher (de-ionizer) and a small dehydrator. Discharge from the blow-down is reduced to less than 30 gpm, and is discharged to the makeup system for the lime slurry, and injected into the SDA. If the discharged water cannot be immediately used, it is stored in a surge tank until it can be reused within the system.

3. Coal Handling Systems

   Coal delivery trucks deliver coal to an enclosed truck unloading station. The enclosure is a self-supported, metal-clad building with gravity louvers on the sidewalls and automated doors at the entry and exit ends for maximum containment of airborne PM. The building is

sufficient size to fully contain a delivery truck, trailer, and pup. Gravity-operated louvers on the enclosure walls provide openings for the design volume of airflow removed by a dust collection system provided for the building. When one of the enclosure doors is opened, the dampers close, and air is drawn through the door openings only. The overhead doors are interlocked such that only one door can be open at a time.

The trucks unload coal into below-grade receiving hoppers sized to accept the complete discharge from a trailer and pup. A grizzly with 6-inch square openings is provided on the hopper to prevent oversize materials from entering and plugging the conveying equipment. A rubber seal boot partially encloses the grizzly and hopper top to minimize fugitive dust emissions during the unloading process. Two variable speed stockout feeders transfer coal from the unloading hoppers onto an inclined-covered, belt conveyor.

Fugitive dust collection for coal truck unloading operations are provided by a dust collector (RCF-BH-001) with a required efficiency of 0.01 grains per dry standard cubic foot (gr/dscf) and a fan that provides a nominal air flow rate of 50,000 actual cubic feet per minute (acfm). Coal dust is collected by the baghouse and is pneumatically conveyed to a coal storage silo. Ductwork connects the dust collector to the building enclosure, hopper rubber seal boot, and feeder transfer point hoods. Inflow air through the enclosure louvers or doors maintains a clean work environment within the enclosure. Inflow air through the hopper facilitates fugitive emissions collection during coal unloading. Additional ventilation is provided at the conveyor transfer points. Ventilation design provides for positive ventilation (negative draft) of the building under worst-case conditions with one door fully open.

The stockout conveyor conveys coal from the receiving hoppers to the top of an active coal storage silo. The silo discharges at the bottom via a reclaim feeder to a covered belt conveyor. This reclaim-conveyor transfers coal from the silo to coal bunkers located within the generation building. A fabric filter bin vent (RCF-BV-002) located on top of the silo controls dust emissions from silo loading with a maximum design outlet grain loading of 0.01 gr/dscf and 7,500 acfm air flow. It also controls fugitive dust emissions from material transfers between the reclaim feeder and reclaim conveyor. Dust pulsed from the bin vent fabric filters falls directly into the silo.

4. Lime Handling Systems

As previously mentioned, the proposed facility uses a lime SDA to control SO_2 and certain HAP emissions. Lime is delivered by truck at a rate of approximately 1 truck per day. Lime is used at a rate of approximately 2,200 lb/hr.

Pebble lime for the SDA is pneumatically unloaded from delivery trucks into a storage silo. The storage silo is equipped with a fabric filter bin vent (FGT-BV-001) to collect fugitive dust generated during loading. The bin vent is limited to a maximum outlet grain loading of 0.01 gr/dscf (with a nominal airflow rate of 1,000 acfm). The bottom of the lime storage silo is enclosed and houses the lime screw feeder, slaker equipment, screw equipment, screw conveyor, and agitated slurry storage tank.

5. Ash and Spent Lime Handling Operations

Combustion of coal in the boiler produces ash. Bottom ash from the boiler and ash collected from the economizer is mixed with water and fed via a system of conveyors to a load-out bunker located outside of the generation building. Front-end loaders transfer the wetted material to trucks for transport off-site. Particulate emissions from these operations

to the atmosphere are negligible since the materials are wet. A pneumatic conveying system collects fly ash and spent lime from the SDA and boiler baghouse. It transfers material to one of two storage silos. SDA material feeds to an FGD ash silo. Material from the baghouse is first directed to a recycle ash silo. Once this silo is filled, the material is routed to the FGD ash silo.

Particulate emissions resulting from loading the recycle ash silo are controlled by a fabric filter bin vent located on top of the silo. The bin vent (WMH-BV-002) is limited to a maximum outlet grain loading of 0.01 gr/dscf (with a nominal airflow rate of 2,000 acfm). Material collected in the recycle ash silo are mixed with cooling tower blowdown water and fed to the SDA.

Material not required for recycle is conveyed to the FGD ash silo. Particulate emissions resulting from silo loading are controlled by a fabric filter bin vent located on top of the silo. The bin vent (WMH-BV-003) is limited to a maximum outlet grain loading of 0.01 gr/dscf (with a nominal airflow rate of 2,000 acfm). Material is discharged from the silo to a screw feeder for either wet or dry loadout into trucks or railcars. An elevated structure supports the silo and loading equipment, allowing trucks and railcars to access beneath. The loadout equipment is enclosed within a silo skirt. The dry loading spout is ventilated to the silo's bin vent.

6. Water Treatment Reagents Handling

Lime and soda ash are stored in separate silos for use in the water treatment system. Each silo is equipped with a bin vent to collect fugitive dust generated during lime loading. The bin vents (RWS-BV-001 – lime and RWS-BV-002 – soda ash) are limited to a maximum outlet grain loading of 0.01 gr/dscf (with a nominal airflow rate of 1,000 acfm).

7. Activated Carbon Handling

Mercury sorbent is delivered to the facility by tractor trailer transport. Sorbent is pneumatically unloaded to a storage silo. The maximum truck unloading rate to the silo is 40,000 lb/hr and the maximum throughput of the sorbent injection system is 90 lb/hr. Therefore, 20 or less trucks will be unloaded per year, one load every 18 days. From the storage silo Hg sorbent is metered and transported to the sorbent injection system by a variable speed volumetric screw feeder. The screw supplies sorbent to a pneumatic eductor that provides the motive force to transport the sorbent to a single injection lance down exhaust stream of the air heater. The MAQP requires that the storage silo be equipped with a fabric filter bin vent (ACI-BV-001) to collect fugitive dust generated during loading and operation.

B. Emission Units and Pollution Control Device Identification

The following table indicates all significant (PTE > 5 tons per year (TPY)) permitted sources of emissions and emission controls utilized for each emitting unit at the RMP facility:

Emissions Unit ID	Emission Unit Description	Pollution Control Device/Practice
EU001	1968 Mitchel of UK Pulverized Coal Wall-Fired Boiler (1304 MMBtu/hr) (PC-Boiler)	NOx – SCR; SO_2 – Dry FGD/SDA PM/PM_{10} – FFB,

Emissions Unit ID	Emission Unit Description	Pollution Control Device/Practice
		CO – Proper design and Good Combustion Practices; VOC – Good Combustion Practices; HCl – FGD/SDA; HF – FGD/SDA; H_2SO_4 – FGD/SDA; Hg – Demonstration Period, Optimization Period, Carbon Injection; Radionuclides – FFB; Trace Metals – FFB
EU002	Coal Processing, Milling, Transfer, Storage, and Handling Operations	Baghouse(s)
EU003	Lime, Activated Carbon/Sorbent Injection, and Ash Material Transfer and Handling Operations	Baghouse(s) & Bin Vent(s)
EU004	Cooling Tower	Mist Eliminator
EU006	Fugitive Emissions: Haul Roads/Vehicle Traffic	Chemical Dust Suppressant and/or Non-Oily and Non-Hazardous Water Treatment

C. Categorically Insignificant Sources/Activities

Pursuant to ARM 17.8.1201(22)(a), an insignificant emission unit means any activity or emissions unit located within a source that: (i) has a potential to emit (PTE) less than 5 TPY of any regulated pollutant; (ii) has a PTE less than 500 pounds per year of lead; (iii) has a PTE less than 500 pounds per year of hazardous air pollutants listed pursuant to Section 7412 (b) of the FCAA; and (iv) is not regulated by an applicable requirement, other than a generally applicable requirement that applies to all emission units subject to Subchapter 12.

RMP did not provide a list of insignificant sources and/or activities. Therefore, this permit does not identify insignificant activities. Because there are no requirements to update such a list, the status of such emission units and/or activities may change.

SECTION III. PERMIT CONDITIONS

A. Emission Limits and Standards

The following emission limits and standards are applicable to RMP facility operations:

1. The Department determined that the emission limits that apply to EU001 – 1968 Mitchel of UK Pulverized Coal Wall-Fired Boiler (1304 MMBtu/hr) (PC-Boiler) are as follows:

   - The PM/PM_{10} limit was established through the required BACT analysis and determination under the provisions of ARM 17.8.752. However, RMP is also subject to 40 CFR 60, Subpart Da. The BACT limits originally established in the air quality permit are more stringent than the NSPS, but the Department retained Subpart Da within the permit because it is an applicable requirement. PM/PM_{10} emissions shall be controlled by the use of a FFB. The applicable filterable PM/PM_{10} limit is 0.012 lb/MMBtu of heat input to the PC-Boiler. The applicable filterable and condensable PM/PM_{10} limit is 0.024 lb/MMBtu of heat input to the PC-Boiler. The 40 CFR 60, Subpart Da filterable PM emission limit is 0.03 lb/MMBtu.

   - The opacity limit was established under the provisions of ARM 17.8.340 and 40 CFR 60.42a(b), Subpart Da. Pursuant to the provisions, RMP shall not cause or authorize to be discharged into the atmosphere from the FFB controlling emissions from the PC-Boiler any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period hour of not more than 27 percent opacity.

   - The NO_x limit and control requirement were established pursuant to ARM 17.8.752. However, RMP is also subject to 40 CFR 60, Subpart Da. The BACT limits originally established in the air quality permit are more stringent than the NSPS, but the Department retained Subpart Da within the permit because it is an applicable requirement. The applicable NO_x limit is 0.09 lb/MMBtu based on a 30-day rolling average, 0.15 lb/MMBtu per 30-day rolling average, and 1.6 lb/MWh pursuant to 40 CFR 60, Subpart Da. NO_x emissions shall be controlled by the use of the SCR.

   - The CO limit and control requirement were established pursuant to ARM 17.8.752. The applicable CO limit is 0.15 lb/MMBtu based on a 30-day rolling average. CO emissions shall be controlled through proper design and good combustion practices.

   - During PC-Boiler startup and shutdown, and SDA atomizer change-outs, as defined in Appendix F in Operating Permit #OP3185-00 and the following emission limits apply:

     1. The SO_2, HCl, HF, and H_2SO_4 mist emissions for the PC-Boiler stack shall be controlled by implementing proper work practices.

     2. SO_2 emissions from the PC-Boiler stack shall not exceed 1465 lb/hr based on 1-hour average.

     3. SO_2 emissions from the PC-Boiler stack shall not exceed 990 lb/hr based on a 3-hour rolling average.

4. SO_2 emissions from the PC-Boiler stack shall not exceed 182.6 lb/hr SO_2 from the PC-Boiler more than 6 hours during any rolling 24-hour time period.

- The SO_2 limits were established under ARM 17.8.749 and ARM 17.8.752. However, RMP is also subject to 40 CFR 60, Subpart Da. The BACT limits originally established in the air quality permit are more stringent than the NSPS, but the Department retained Subpart Da within the permit because it is an applicable requirement. SO_2 emissions shall be controlled through the use of a SDA. Except during PC-Boiler startup, shutdown and SDA atomizer changeout, the SO_2 emissions shall not exceed 182.6 lb/hr based on a 1-hour average. The SO_2 emissions from the PC-Boiler stack shall not exceed 0.11 lb/MMBtu based on a 30-day rolling average, and the control efficiency for the SO_2 emission control equipment shall be maintained at a minimum of 90% based on a 30-day rolling average. The 40 CFR 60, Subpart Da SO_2 emission limit is 0.15 lb/MMBtu and 1.4 lb/MWh based on a 30-day rolling average.

- The Volatile Organic Compound (VOC) emission limit and control requirements were established pursuant to ARM 17.8.752. The applicable limit is 0.0034 lb/MMBtu. VOC emissions from the PC-Boiler shall be controlled by good combustion practices.

- The HCl gas emission limits were established as a synthetic minor limit for MACT applicability. The applicable limits are 1.54 lb/hr and 0.00118 lb/MMBtu based on a 1-hour average. The HCl emission control technology requirement was established pursuant to ARM 17.8.752. HCl emissions shall be controlled by the FGD/SDA systems, in tandem.

- The HF gas emission limits were established as a synthetic minor limit for MACT applicability. The applicable limits are 0.67 lb/hr and 0.00051 lb/MMBtu based on a 1-hour average. The HF emission control technology requirement was established pursuant to ARM 17.8.752. HF emissions shall be controlled by the FGD/SDA systems, in tandem.

- The H_2SO_4 mist emissions limits and control requirement were established pursuant to ARM 17.8.752. The applicable H_2SO_4 limits are 8.2 lb/hr and 0.0063 lb/MMBtu based on a 1-hour average. H_2SO_4 mist emissions from the PC-Boiler shall be controlled by the use of dry FGD/SDA, in tandem.

- The radionuclides emissions limits and control requirement were established pursuant to ARM 17.8.752. The PC-Boiler's PM_{10} emission limit shall be used as a surrogate emission limit for the applicable radionuclides limit. Radionuclides emissions from the PC-Boiler shall be controlled by the use of a FFB.

- The trace metals emissions limits and control requirement were established pursuant to ARM 17.8.752. The PC-Boiler's PM_{10} emission limit shall be used as a surrogate emission limit for the applicable trace metals limit. Trace metals emissions from the PC-Boiler shall be controlled by the use of a FFB.

- New mercury control requirements implemented under the MAQP program have required that RMP modify its MAQP to include mercury provisions under the ARM 17.8.771 for the Hardin Plant. Additionally, RMP provided information relevant to, and

requested that MAQP #3185-05 establish emission limitations and requirements satisfying, the Hardin Generating Station Settlement Agreement signed by the BER on May 6, 2005. The information provided described the results of the Hg Demonstration Period and Hg Optimization Period efforts required by the Settlement Agreement in order to establish a numeric Hg emission limitation based on performance of the BACT derived ACI base technology controls, in conjunction with the control system optimization efforts. On July 16, 2009, the Department issued MAQP #3185-05 with the following mercury limits and operating requirements, which are also reflected in Permit #OP3185-02:

1. Beginning January 1, 2010, RMP shall limit Hg emissions from the PC Boiler to an emission rate equal to or less than 0.9 pounds Hg per trillion British thermal units (lb/TBtu), calculated as a rolling 12-month average (ARM 17.8.771 and ARM 17.8.752).

2. RMP shall install a sorbent/ACI system. RMP shall implement the operation and maintenance of the ACI systems on or before January 1, 2010 (ARM 17.8.771 and ARM 17.8.752).

The mercury limit will be monitored using a Mercury Emission Monitoring System (MEMS) pursuant to Appendix G.

2. The Department determined that the emission limits that apply to EU002 – Coal Processing, Milling, Transfer, Storage, and Handling Operations are as follows:

- The PM/PM_{10} emission limit for the coal unloading baghouse – RCF-BH-001; coal silo baghouse – RCF-BH-002; and the coal storage bunkers baghouse – RCF-BH-003 controlling coal processing, milling, transfer, storage, and handling operations were established pursuant to ARM 17.8.752 as affected control unit grain (gr) loading limits. The applicable limit is 0.10 gr/dscf per affected unit.

- The opacity limit for coal processing, milling, transfer, storage, and handling operations was established under ARM 17.8.304 and ARM 17.8.308, as applicable. The applicable limit is 20% opacity averaged over a 6 consecutive minute period (see General Requirements Section III.A. of OP3185-00).

3. The Department determined that the emission limits that apply to EU003 – Lime Activated Carbon/Sorbent Injection and Ash Material Transfer and Handling Operations are as follows:

- The PM/PM_{10} emission limit for the SDA lime silo bin vent: FGT-BV-001; FGD ash silo bin vent: WMH-BV-002; Recycle ash silo bin vent: FGT-BV-002; Water treatment lime silo baghouse: RWS-BH-001; and the Soda ash silo baghouse: RWS-BH-002 controlling emissions from the lime and ash material transfer and handling operations were established pursuant to ARM 17.8.752 as affected control unit grain (gr) loading limits. The applicable limit is 0.10 gr/dscf per affected unit.

- The opacity limit for the lime and ash material transfer and handling operations was established under ARM 17.8.304 and ARM 17.8.308, as applicable. The applicable limit

is 20% opacity averaged over a 6 consecutive minute period (see General Requirements Section III.A. of OP3185-00).

- RMP shall operate and maintain the activated carbon injection/sorbent handling systems, including the bin vent filter systems, to provide the maximum air pollution control for that which the systems were designed (ARM 17.8.752).

4. The Department determined that the emission limits that apply to EU004 – Cooling Tower are as follows:

   - The cooling tower PM_{10} emission limit and control requirement were established pursuant to ARM 17.8.752. The applicable limit is no more than 0.001% of circulating water flow. PM_{10} emissions from cooling tower shall be controlled by operation and maintenance of a mist eliminator on the cooling tower.

   - The opacity limit was established in ARM 17.8.304 and ARM 17.8.308, as applicable. The applicable limit is 20% opacity averaged over a 6 consecutive minute period (see General Requirements Section III.A. of OP3185-00).

5. The Department determined that the applicable opacity limit that applies to EU005 – Fugitive Emissions: Haul Roads/Vehicle Traffic are as follows:

   - The applicable limits were established under ARM 17.8.308. The applicable limit is reasonable precautions limiting fugitive emissions to 20% opacity averaged over a 6 consecutive minute period.

B. Monitoring Requirements

ARM 17.8.1212(1) requires that all monitoring and analysis procedures or test methods required under applicable requirements are contained in operating permits. In addition, when the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

The requirements for testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance do not require the permit to impose the same level of rigor for all emission units. Furthermore, they do not require extensive testing or monitoring to assure compliance with the applicable requirements for emission units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. When compliance with the underlying applicable requirement for an insignificant emissions unit is not threatened by lack of regular monitoring and when periodic testing or monitoring is not otherwise required by the applicable requirement, the status quo **(i.e., no monitoring)** will meet the requirements of ARM 17.8.1212(1). Therefore, the permit does not include monitoring for insignificant emission units.

The permit includes periodic monitoring or recordkeeping for each applicable requirement. The information obtained from the monitoring and recordkeeping will be used by the permittee to periodically certify compliance with the emission limits and standards. However, the

Department may request additional testing to determine compliance with the emission limits and standards.

C. Test Methods and Procedures

The operating permit may not require testing for all sources if routine monitoring is used to determine compliance, but the Department has the authority to require testing if deemed necessary to determine compliance with an emission limit or standard. In addition, the permittee may elect to voluntarily conduct compliance testing to confirm its compliance status.

D. Recordkeeping Requirements

The permittee is required to keep all records listed in the operating permit as a permanent business record for at least 5 years following the date of the generation of the record.

E. Reporting Requirements

Reporting requirements are included in the permit for each emissions unit and Section V of the operating permit "General Conditions" explains the reporting requirements. However, the permittee is required to submit semi-annual and annual monitoring reports to the Department and to annually certify compliance with the applicable requirements contained in the permit. The reports must include a list of all emission limit and monitoring deviations, the reason for any deviation, and the corrective action taken as a result of any deviation. RMP is also required to submit quarterly reports as required by Section III.B.II and Appendix E of this Operating Permit #OP3185-05.

F. Public Notice

In accordance with ARM 17.8.1232, a public notice was published in the *Billings Gazette* newspaper on March 19, 2020. The Department provided a 30-day public comment period on the draft operating permit from March 25, 2020 to April 24, 2020. ARM 17.8.1232 requires the Department to keep a record of both comments and issues raised during the public participation process. The comments and issues received by April 24, 2020, will be summarized, along with the Department's responses, in the following table. All comments received during the public comment period will be promptly forwarded to RMP so they may have an opportunity to respond to these comments as well.

Summary of Public Comments

Person/Group Commenting	Comment	Department Response
None	None	N/A

G. Draft Permit Comments

Summary of Permittee Comments

Permit Reference	Permittee Comment	Department Response
None	None	N/A

Summary of EPA Comments

Permit Reference	EPA Comment	Department Response
None	None	N/A

SECTION IV. FUTURE PERMIT CONSIDERATIONS

A. MACT Standards

As of the date of draft of this permit, the Department is unaware of any proposed or pending MACT standards, in addition to those that are mentioned, that are applicable to this facility.

B. NESHAP Standards

As of the date of draft of this permit, RMP is not subject to any standards listed under 40 CFR Part 61, with the possible exception of Subpart M – Asbestos, as applicable.

C. NSPS Standards

RMP shall comply with the applicable standards and provisions of 40 CFR Part 60. RMP is subject to the following:

40 CFR 60, Subpart A – General Provisions. This subpart applies to all affected equipment or facilities subject to an NSPS.

40 CFR 60, Subpart Da - Standards of Performance for Electric Utility Steam Generating Units. This subpart applies to the RMP PC-Boiler because it is an electric utility steam generating unit with a heat input capacity greater than 250 MMBtu/hr. The PC-Boiler was built in 1968, prior to the applicability date of September 18, 1978. However, based on information provided by RMP (submitted on April 5, 2005) regarding the upgrades made to the Boiler, the Department determined that reconstruction (as defined under 40 CFR 60.15) has occurred; therefore, Subpart Da is applicable.

40 CFR 60, Subpart Y – Standards of Performance for Coal Preparation Plants. This subpart applies to the RMP facility because RMP was constructed after October 24, 1974, and the facility will pulverize or "crush" more than 200 tons/day of coal.

D. Risk Management Plan

As of April 29, 2014, this facility does not exceed the minimum threshold quantities for any regulated substance listed in 40 CFR 68.115 for any facility process. Consequently, this facility is not required to submit a Risk Management Plan.

If a facility has more than a threshold quantity of a regulated substance in a process, the facility must comply with 40 CFR 68 requirements no later than June 21, 1999; 3 years after the date on which a regulated substance is first listed under 40 CFR 68.130; or the date on which a regulated substance is first present in more than a threshold quantity in a process, whichever is later.

E. Compliance Assurance Monitoring (CAM)

In accordance with 40 CFR Part 64, and the Administrative Rules of Montana (ARM) Title 17, Chapter 8, Subchapter 15, CAM applies to each pollutant-specific emitting unit at a major stationary source (Title V) if the affected unit is subject to a pollutant specific emission limitation or standard; the unit uses a control device to achieve compliance with the applicable limitation

or standard; and the unit has a pre-control PTE the regulated pollutant in an amount that exceeds 100% of the Title V major source threshold.

The RMP PC-Boiler is subject to SO_2 and NO_x emissions limits; requires specific SO_2 and NO_x control equipment; and has the pre-control (and post-control) PTE SO_2 and NO_x in an amount that exceeds 100% of the Title V major source threshold. However, in accordance with 40 CFR 64.2(b)(1)(vi), since RMP is required to use SO_2 and NO_x continuous emissions monitoring systems (CEMS) as "continuous compliance determination method(s)," 40 CFR Part 64 and ARM 17.8, Subchapter 15, applicability is precluded.

The RMP PC-Boiler is subject to specific PM/PM_{10} emissions limits; requires specific PM/PM_{10} control equipment; and has the pre-control PTE PM/PM_{10} in an amount that exceeds 100% of the Title V major source threshold. However, in accordance with 40 CFR 64.5(b) and ARM 17.8.1509(2), because post-control PM/PM_{10} emissions from the PC-Boiler are less than 100% of the Title V major source threshold, a CAM plan was not required until the first renewal of the RMP Title V Operating Permit. RMP submitted the required CAM plan which was included as Appendix H in the Title V Operating Permit.

RMP is required by MAQP #3185-06 and Title V Operating Permit #OP3185-05 to operate a certified continuous opacity monitoring system (COMS) for continuous compliance demonstration with their opacity limits and to operate a fabric filter baghouse for control of PM emissions from the PC-boiler. RMP is also subject to 40 CFR 60, Subpart Da – Standards of Performance for Electric Utility Steam Generating Units which has both PM and opacity standards. The BACT PM emission limit for the PC-boiler is more stringent than the applicable PM standard contained in Subpart Da. §60.48Da(o) requires that affected facilities that commenced construction, reconstruction, or modification after February 28, 2005, but before May 4, 2011, must monitor the performance of each fabric filter (baghouse) using a COMS according to the requirements in that section. RMP commenced construction prior to this timeframe and is therefore not required by Subpart Da to utilize their COMS in this manner; however, they proposed to utilize their COMS to monitor baghouse performance in accordance with the requirements of §60.48Da(o) as a CAM indicator to provide reasonable assurance of continuous compliance with their PM emission limits. RMP's proposal of utilizing their certified COMS in accordance with the requirements of §60.48Da(o)(2) fulfills the general criteria for monitoring design as specified in ARM 17.8.1504. Additionally, ARM 17.8.1506 states that a certified COMS shall be deemed to satisfy the general design criteria in ARM 17.8.1504 and that the COMS shall be used as a CAM indicator.

§60.48Da(p) allows for a source to elect to utilize a PM CEMS in lieu of the COMS as indicated in §60.48Da(o). The PM CEMS data would be used for compliance demonstration purposes and would replace any periodic PM source testing required by Subpart Da. The Department elected to not require RMP to use a PM CEMS because the proposed use of the COMS is supported by federal regulations (Subpart Da) as an appropriate indicator of baghouse performance and therefore reasonable assurance of compliance with PM emission limits. A PM CEMS as a CAM indicator does not offer additional or improved assurance of continuous compliance beyond what can be provided by the proposed use of the COMS in conjunction with periodic source testing. §60.48Da(o) describes how to determine baseline opacity levels indicative of normal operation of the baghouse, how to determine exceedances of the baseline level, and appropriate actions to be taken depending on the level of exceedance of the baseline level. The source testing frequency for PM/PM_{10} compliance is required annually. In addition, while RMP uses filterable PM emissions as a surrogate for non-mercury HAP metals for

compliance demonstration with 40 CFR 63, Subpart UUUUU – National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units, PM source testing is required four times per year.

During development of the original PM CAM plan, the Department implored RMP to consider the use of the pressure differential across the baghouse as an additional CAM indicator. This is because the pressure differential across a baghouse is often associated with the integrity of the filter media. A sudden drop in pressure could suggest that the filter media has been compromised or bypassed which would decrease the effectiveness of the control device. In response, RMP provided information on the pressure differential readings in conjunction with COMS readings during some recent episodes of elevated opacity conditions. While these elevated opacity conditions were not in excess of any opacity standard, they were high enough to prompt action by RMP personnel in accordance with the draft version of this CAM plan which they began operating under in order to determine the efficacy of the plan. During those episodes, the COMS readings began to rise which prompted RMP to take corrective action. Those corrective actions resulted in the discovery of some compromised filter bags which were contributing to the elevated opacity readings. The pressure differential readings did not indicate a corresponding drop in pressure as the COMS readings began to rise, suggesting that the pressure differential readings were not a reliable early indicator of baghouse issues. The pressure differential only showed a notable drop in pressure when the plant was shut down and airflow was reduced. Therefore, the Department concurred with RMP's claim that the pressure differential was not a reliable early indicator of filter media issues and therefore not a suitable CAM indicator for this unit.

The RMP PC-Boiler is subject to a specific CO emission limit and has the pre-control (and post control) PTE CO in an amount that exceeds 100% of the Title V major source threshold; however, RMP is not subject to CAM for CO emissions because the PC-Boiler does not incorporate pollutant-specific controls for this pollutant.

Further, RMP is not subject to CAM for any other regulated pollutant because unit specific pre-control PTE of all other pollutants is less than 100% of the applicable Title V major source threshold.

F. Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule

On May 7, 2010, EPA published the "light duty vehicle rule" (Docket # EPA-HQ-OAR- 2009-0472, 75 FR 25324) controlling greenhouse gas (GHG) emissions from mobile sources, whereby GHG became a pollutant subject to regulation under the Federal and Montana Clean Air Act(s). On June 3, 2010, EPA promulgated the GHG "Tailoring Rule" (Docket # EPA-HQ-OAR-2009-0517, 75 FR 31514) which modified 40 CFR Parts 51, 52, 70, and 71 to specify which facilities are subject to GHG permitting requirements and when such facilities become subject to regulation for GHG under the PSD and Title V programs.

Under the Tailoring Rule, any PSD action (either a new major stationary source or a major modification at a major stationary source) taken for a pollutant or pollutants other than GHG that would become final on or after January 2, 2011 would be subject to PSD permitting requirements for GHG if the GHG increases associated with that action were at or above 75,000 TPY of carbon dioxide equivalent (CO_2e) and greater than 0 TPY on a mass basis. Similarly, if such action were taken, any resulting requirements would be subject to inclusion in the Title V Operating Permit. Facilities which hold Title V permits due to criteria pollutant

emissions over 100 TPY would need to incorporate any GHG applicable requirements into their operating permits for any Title V action that would have a final decision occurring on or after January 2, 2011.

Starting on July 1, 2011, PSD permitting requirements would be triggered for modifications that were determined to be major under PSD based on GHG emissions alone, even if no other pollutant triggered a major modification. In addition, sources that are not considered PSD major sources based on criteria pollutant emissions would become subject to PSD review if their facility-wide potential emissions equaled or exceeded 100,000 TPY of CO_2e and 100 or 250 TPY of GHG on a mass basis depending on their listed status in ARM 17.8.801(22) and they undertook a permitting action with increases of 75,000 TPY or more of CO_2e and greater than 0 TPY of GHG on a mass basis. With respect to Title V, sources not currently holding a Title V permit that have potential facility-wide emissions equal to or exceeding 100,000 TPY of CO_2e and 100 TPY of GHG on a mass basis would be required to obtain a Title V Operating Permit.

The Supreme Court of the United States (SCOTUS), in its Utility Air Regulatory Group v. EPA decision on June 23, 2014, ruled that the Clean Air Act neither compels nor permits EPA to require a source to obtain a PSD or Title V permit on the sole basis of its potential emissions of GHG. SCOTUS also ruled that EPA lacked the authority to tailor the Clean Air Act's unambiguous numerical thresholds of 100 or 250 TPY to accommodate a CO2e threshold of 100,000 TPY. SCOTUS upheld that EPA reasonably interpreted the Clean Air Act to require sources that would need PSD permits based on their emission of conventional pollutants to comply with BACT for GHG. As such, the Tailoring Rule has been rendered invalid and sources cannot become subject to PSD or Title V regulations based on GHG emissions alone. Sources that must undergo PSD permitting due to pollutant emissions other than PSD may still be required to comply with BACT for GHG emissions.