MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT

Permitting and Compliance Division
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PPL Montana, LLC
JE Corette Steam Electric Station
Section 2, Township 1 South, Range 26 East, Yellowstone County, Montana
301 Charlene St.
Billings, MT 59107

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		Method 5, Method 6, Method 9
Ambient Monitoring Required		X	
COMS Required	X		OP2953-07 Appendix E
CEMS Required	X		OP2953-07 Appendix F and Appendix G
Mercury Emissions Monitoring System (MEMS) Required	X		
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		As Applicable
Monthly Reporting Required		X	
Quarterly Reporting Required	X		
Applicable Air Quality Programs			
ARM Subchapter 7 Montana Air Quality Permit (MAQP)	X		MAQP #2953-00
New Source Performance Standards (NSPS)		X	
National Emission Standards for Hazardous Air Pollutants (NESHAPS)		X	No, Except for 40 CFR 61, Subpart M
National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	X		40 CFR 63, Subpart ZZZZ
Maximum Achievable Control Technology (MACT)		X	
Major New Source Review (NSR) – includes Prevention of Significant Deterioration (PSD) and/or Non-attainment Area (NAA) NSR	X		Facility is a major stationary source, but has not gone through NSR permitting
Risk Management Plan Required (RMP)		X	
Acid Rain Title IV	X		OP2953-07, Appendix H
Compliance Assurance Monitoring (CAM)	X		OP2953-07, Appendix K
State Implementation Plan (SIP)	X		General SIP and SO_2 SIP, Appendix I

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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 emissions units affected by the operating permit proposed for this facility. The document is intended for reference during review of the permit by the United States 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 Title V Operating Permit renewal application submitted to the Department of Environmental Quality (Department) on April 16, 2010, and additional information received on March 29, 2012. Historic information in this document are based on information gathered from the original application submitted by Montana Power Company (MPC) on June 12, 1996, and additional submittals on December 20, 1996, October 7, 1996, July 21, 1997, October 1, 1997, and December 21, 1999. Requests for administrative amendments were submitted on January 17, 2003, and February 14, 2003, (OP2953-02), and October 9, 2003 (OP2953-03). A request for renewal was submitted on August 4, 2003, with additional information received on April 16, 2004 (OP2953-04). A request for a permit modification was submitted on December 31, 2008 (OP2953-05).

B. Facility Location

The PPL Montana, LLC (PPLM) JE Corette facility is located in Section 2, Township 1 South, Range 26 East, Yellowstone County, Montana.

C. Facility Background Information

Montana Power Company began operation of the Corette Plant in September 1968. The construction and operation of the plant began prior to the implementation of the Montana air quality regulations. No preconstruction permit was required. Since 1968, Montana Air Quality or preconstruction permitting has not been triggered at the facility because no changes have resulted in an increase in emission of 25 or more tons per year. However, new mercury control requirements implemented under the preconstruction permitting program required that PPLM obtain a Montana Air Quality Permit (MAQP) to include mercury provisions under the Administrative Rules of Montana (ARM) 17.8.771 for the Corette Plant. **MAQP #2953-00** was issued on April 9, 2009.

Operating Permit #OP2953-00 was issued effective on January 1, 1999.

On June 18, 1999, the Department was initially notified the JE Corette facility would be sold by Montana Power Company (MPC) to the Pennsylvania Power & Light Global (PP&L). This correspondence stated that the expected closing would occur around September 2, 1999; however, subsequent phone conversations revealed the closing would be postponed. On December 21, 1999, the Department received final notice concerning closing of the sale for the JE Corette facility in Billings Montana. The signing of contracts transferring ownership to PP&L took place on December 17, 1999. An administrative amendment was issued effective December 29, 1999, to transfer Permit #OP2953-00 from MPC to PP&L. **Operating Permit #OP2953-01** replaced Operating Permit #OP2953-00.

On January 17, 2003, and February 14, 2003, administrative amendment requests were submitted to change the responsible official for the facility from Carlton Grimm to James Parker and to change the facility name from Pennsylvania Power & Light Montana, LLC to PPLM. **Operating Permit #OP2953-02** replaced Operating Permit #OP2953-01.

On October 9, 2003, the Department received a request from PPLM for an administrative amendment of OP2953-02 to update Section V.B.3 of the General Conditions incorporating changes to federal Title V regulations 40 CFR 70.6(c)(5)(iii)(B) and 70.6(c)(5)(iii)(C) (to be incorporated into Montana's Title V rules at ARM 17.8.1213) regarding Title V annual compliance certifications. **Operating Permit #OP2953-03** replaced Operating Permit #OP2953-02.

On August 4, 2003, the Department received an application for the renewal of Title V Operating Permit #OP2953-03. Additional information was received by the Department on April 16, 2004. The permit was updated to reflect current Department rules, rule citations, and permit format. **Operating Permit #OP2953-04** replaced Operating Permit #OP2953-03.

On December 31, 2008, the Department received an application for the modification of Title V Operating Permit #OP2953-04 to include mercury emission limitations under ARM 17.8.771. The mercury control rule is implemented through the MAQP program and required that PPLM obtain an MAQP to establish a mercury emission limit and associated operating requirements for the boiler. On February 3, 2009, the Department received a request to include Steve Christian as an Alternate Responsible Official. On April 9, 2009, the Department issued MAQP #2953-00 with mercury limits and operating requirements. Operating Permit #OP2953-04 was updated to reflect the new mercury control requirements and the new Alternate Responsible Official. **Operating Permit #OP2953-05** replaced Operating Permit #OP2953-04.

D. Current Permit Action

On April 16, 2010, the Department received a complete Title V Operating permit renewal application from PPLM. The Department issued Draft Title V Permit #OP2953-06 on May 16, 2011. The Department received substantive comments regarding the draft permit. The Department worked on preparing responses to comments and on January 17, 2012, the Department requested additional information from PPLM concerning the Compliance Assurance Monitoring plan (CAM plan) for the facility. The Department received this additional information on March 29, 2012. The Department prepared responses to the comments received on Draft Title V Permit #OP2953-06 and they are included in Section VI of this document.

The Department made a determination that it was appropriate to re-issue the draft permit based on the substantive changes made to the CAM plan. This draft permit was assigned #OP2953-07. **Title V Permit #OP2953-07** will replace Title V Permit #OP2953-05. The Draft Title V Operating Permit #OP2953-07 was issued on August 10, 2012. The 30 day public comment period was set to end on September 10, 2012. On August 17, 2012, the Department received a request to extend the public comment period on Draft Operating Permit #OP2953-07. The Department granted the request and approved a 14-day extension to the original 30-day public comment period on Draft Operating Permit #OP2953-07. In order to be considered, the comments on Draft Operating Permit #OP2953-07 were to be received by September 24, 2012. The Department has prepared responses to the comments received on Draft Title V Operating Permit #OP2953-07 and they are included in Section VII of this document.

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 PPLM Corette facility was last inspected on April 22, 2010. A Full Compliance Evaluation (FCE) was conducted on May 3, 2010. At the time of the inspection and FCE, the facility was found to be in compliance with all applicable requirements. On December 6, 2010, the second semiannual particulate compliance test for 2010 was conducted. Preliminary results reported on December 13, 2010 indicated particulate emissions were higher than the allowable level. Immediate action was taken by lowering the plant load to 150 MW gross, a level at which compliance with the particulate emission standard was demonstrated in July 2010. On December 14, 2010, a series of diagnostic particulate tests was performed which confirmed particulate emissions were within the allowable level at that load (150 MW gross). On December 16, 2010, final results from the December 6, 2010 test were received, which confirmed particulate emissions higher than the allowable level. Plant operations were limited to 125 MW gross from December 17, 2010 to January 10, 2011 due to coal mill repairs. On December 20, 2010, another particulate compliance test was conducted at 125 MW gross; it showed particulate emissions within the allowable level. On January 12, 2011, a particulate compliance test was conducted at 150 MW gross. It also showed compliance with the particulate standard at this self-imposed load limitation. Another particulate compliance test was conducted at 155 MW gross on February 10, 2011. Those results indicated particulate emission within the allowable level.

On March 22, 2011, the Department issued a violation letter to PPLM regarding the particulate emissions violation from the December 13, 2010, emissions test. Formal enforcement was taken and on February 2, 2012, the Administrative Order on Consent (AOC) was signed and the violation was considered closed as of July 5, 2012, when the Department determined all terms of the AOC had been met. The settlement included a Supplemental Environmental Project which included paving approximately 13,000 square feet of gravel at the PPLM facility; the remainder of the settlement was a cash payment of an $8,000 penalty. The AOC did not contain any provisions that need to be added to the Title V permit.

On September 28, 2012, the Department issued an FCE that included an Inspection Report for PPLM. The FCE contained compliance-related information that was discovered by the Department in the course of conducting the inspection. The FCE also contained the full compliance analysis, and as documented in the FCE Section XI. Findings and Recommendations are summarized below:

A The Montana SIP for sulfur dioxide (SO_2) contains conditions under which PPLM must monitor compliance at the J.E. Corette facility. On June 9, 1998, the Department and Montana Power Company (now PPLM) stipulated to complying with paragraphs 1-20, including Exhibit A and Attachment #1. Exhibit A, Section 6 B (3), states that the Montana Power Company (PPLM) shall install and maintain a backup temperature and flow rate monitoring system for the main boiler stack. Upon installation, Montana Power Company (PPLM) shall operate the backup temperature and flowrate monitoring system whenever the primary (CEMS) temperature and flowrate monitoring system is determined to have failed. On August 21, 2012, during a review of the SO_2 SIP, Department staff learned that the backup flow monitoring equipment was not installed. J.E. Corette staff explained that backup flow data is estimated during flow monitor down times by substituting more restrictive data, as required under 40 CFR Part 75; and

B. On June 9, 1998, the Department and Montana Power Company (PPLM) stipulated to complying with paragraphs 1-9, including Exhibit A-1 and attachments. In Exhibit A-1, Section 4 (E) (8), any modifications to the Quality Assurance Project Plan (QAPP) and Standard Operating Procedures (SOP) documents shall be submitted to the Department within 60 days after the CEMS equipment changes, including the installation of the backup temperature and flow rate monitoring system equipment, have been made and shall follow similar timelines as presented in Section 4(E)(2-5) of the Exhibit A-1. On September 1, 2010, PPLM submitted to the Department the Stack Monitor Certification Test Report for new SO_2, oxides of nitrogen (NO_x), and carbon dioxide (CO_2) monitors.

At the time of issuance of this proposed permit, the Department is further reviewing these findings with PPLM.

SECTION II. SUMMARY OF EMISSION UNITS

A. Facility Process Description

PPLM operates one tangential coal fired boiler and associated equipment for the generation of electricity.

B. Emission Units and Pollution Control Device Identification

Emission Unit ID	Description	Pollution Control/Device Practice
EU1	Fly Ash Handling System	Dust collection equipment; dustless ash loading system; or contained railcars and trucks
EU2	Auxiliary Boiler	None
EU3	Coal Handling	Dust suppression chemicals (foam),; water on conveyor #3, covered conveyors, telescopic chute; or dust collectors
EU4	Coal Storage Piles	Sealant (dead storage piles), water and dust suppressant application (active piles)
EU5	Gasoline Storage Tank	None
EU7	JE Corette Boiler	Electrostatic precipitator; mercury oxidizer/sorbent, low sulfur coal
EU8	Plant Roads	Washed and cleaned with dust suppressant, water application
EU9	Process Ponds	Wet material
EU11	Mercury Oxidizer/Sorbent Handling System	Bin vent filter

C. Categorically Insignificant Sources/Activities

The following is a list of the emission units that are included as insignificant in this operating permit.

Emission Unit ID	Description
EU11	Process Tank Vents
EU12	Carbon Dioxide System Safety Valves and Vents
EU10	1,000 Gallon Diesel Tank

SECTION III. PERMIT CONDITIONS

A. Emission Limits and Standards

The following is a discussion of some applicable requirements.

1. Operation Modification Plan

The Operation Modification Plan (OMP) existed prior to the Title V permitting program. Therefore, a brief history of the OMP has been included and should be noted that PPLM was previously the Montana Power Company. On February 28, 1985, the Montana Department of Health and Environmental Sciences (DHES) issued a Notice of Violation/Order to Take Corrective Action regarding particulate matter emissions from the Montana Power Company's (MPC) J.E. Corette Plant in Billings. This Order required MPC to submit a Compliance Plan, the OMP, to the DHES's Air Quality Bureau (AQB) by July 1, 1985. The plan was to specify the measures adequate to reduce emissions to levels below the standard in ARM 17.8.309 (previously ARM 16.8.1402). This plan was submitted to the AQB on June 17, 1985, and was approved by the AQB on July 16, 1985.

The Order to Take Corrective Action allowed the Compliance Plan to address both Air Pollution Control (APC) equipment modifications and operating changes which would be successful in maintaining particulate matter emissions within the standard. The approved Compliance Plan did contain both APC Modification and OMP.

The original deadline for providing the AQB with a demonstration that the OMP would keep particulate matter emissions within limits was April 1, 1986. MPC requested, and the AQB approved, extending the deadline to May 1, 1986, in order to complete additional testing necessary to confirm critical aspects for final Plan development. This testing was completed and added to the data base from which the Plan was prepared.

Since July 16, 1986, the OMP has been implemented successfully by MPC. It became apparent from the data collected during compliance tests mandated in the Plan that mass emissions were consistently well below the emission standard in ARM 17.8.309 (previously ARM 16.8.1402). Operating conditions in the summer of 1986 suggested that some of the OMP specifications were precluding the most cost effective, yet still environmentally sound, operation of the J.E. Corette Plant.

MPC, with AQB consent, conducted tests in July and November 1987 to confirm that plant operation outside of OMP ranges for certain operational parameters did not negatively affect the plant's ability to meet the ARM standard. Test data did confirm this fact and in February, 1988 the AQB consented to allow the plant to operate in any manner deemed necessary to achieve good power plant practice as long as all emission standards were met. The data from the confirmation tests, as well as all compliance testing since OMP inception, were added to the OMP data base, and Revision 2 updated the OMP to reflect these changes.

Revision 3 of the OMP incorporated a change in the method of compliance demonstration. Since OMP inception, plant compliance was demonstrated by reported adherence to the Operational Assessment Parameters (OAP) and the results of quarterly Reference Method 5 tests. On July 21, 1989, the AQB agreed to a May 9 proposal by MPC to reduce the number of annual particulate tests necessary to demonstrate compliance.

Agreed upon was a reduction from four tests per year to two per year, with the tests performed in alternating quarters. In anticipation of increased reliance upon the opacity monitor for compliance demonstration, this agreement also provided for the performance of a quality control

audit on the monitor twice per year in the quarters when no compliance test is conducted, plus the performance of a comprehensive field monitor calibration once per year. The results of these QC activities were reported to the AQB in the J.E. Corette monthly emissions reports. These changes were implemented in 1990.

On November 13 and 28, 1990, the Corette plant was found in violation of the ARM 17.8.309 (previously ARM 16.8.1402) requirements due to a malfunction of the electrostatic precipitator (ESP). This malfunction necessitated electrically splitting the west outlet bank, or taking one-half of this bank out of service. The Consent Decree entered in the resulting enforcement action in state district court included conditions requiring MPC to amend the OMP to increase compliance testing for a specified time and address ESP malfunctions. The Consent Decree was contained in Appendix IV of the OMP.

Revision 4 incorporated provisions for increasing particulate compliance test frequency from semi-annually to quarterly. This increased frequency was applicable for two years, starting in September, 1991 and ending in September, 1993, at which time the frequency of testing reverted back to semi-annually. Revision 4 also addressed times when the ESP malfunctions, resulting in all or a portion of a bank being taken out of service. This revision defined a specific test plan to determine a safe level of particulate compliance under these conditions. This response plan did not include reliance upon opacity to indicate mass emissions, since the normal opacity/mass relationship may be altered by the ESP malfunction.

The OMP was modified as part of draft permit OP2953-07 to incorporate changes that resulted from changes in the CAM plan, and Revision 5 was included as part of the draft permit . The Department received comments from PPLM regarding the incorporation of OMP Revision 4, the updated OMP Revision 5, and the CAM Plan in draft OP2953-07. Upon reviewing the comments, the Department determined that Revision 5 of the OMP should replace Revision 4. Also, compliance with the CAM Plan constitutes compliance with the OMP. However, because the OMP resulted from a district court consent decrees, the Department does not have the authority under Title V to eliminate the OMP. Also, one remaining requirement from the 1991 Consent Decree was not included in the CAM Plan. The proposed permit requires compliance with the CAM Plan and a provision of the 1991 Consent Decree concerning actions required if the ESP malfunctions. That provision has been added in Section III.G of permit OP2953-07. It requires the following:

> When a malfunction of the electrostatic precipitator occurs resulting in the failure of a bank or a portion of a bank, PPLM shall reduce the load at the Corette Plant to 150 MWG and schedule particulate emission compliance source testing within 40 hours. Those tests would take place at four different loads (140, 145, 150, and 155 MWG). The Plant would then operate at the highest load where all three runs in a test series demonstrate compliance with ARM 17.8.309 (previously ARM 16.8.1402). If all tests indicated emission rates above the standard, the Plant would reduce load to 135 MWG and schedule another series of particulate emission compliance source testing within 40 hours. It is recognized that as a result of the testing to determine compliance described above, PPLM will be altering the load of the Corette Plant which will affect the rate of particulate emissions, and that emissions in excess of the standard in ARM 17.8.309 (previously ARM 16.8.1402) are possible. Such testing to determine compliance is necessary for MPC to derive an operational strategy to respond to the malfunction of the electrostatic precipitator.

2. SIP

On August 19, 1996, the Board of Environmental Review issued an order to MPC that included a signed stipulation. The order adopted revisions to the MPC control strategy for attainment and maintenance of the SO_2 National ambient Air Quality Standard for the Billings/Laurel Area. The emissions limits and methods of demonstrating compliance are applicable requirements for operating permit purposes. EPA approved the Billings/Laurel SO_2 Control Plan into the Montana State Implementation Plan (SIP) on May 2, 2002, for an effective date of June 2, 2002. The SIP in its entirety can be accessed, as listed in Appendix I, from the Department as well as from the web link: EPA's Air Pollution State Implementation Plans for Region 8 | Region 8 | US EPA. Please select SIP material for Yellowstone County once you access the web page and see Appendix I for step by step instructions.

3. Mercury

Mercury control requirements implemented under the preconstruction permitting program have required that PPLM obtain an MAQP to include mercury provisions under ARM 17.8.771 for the Corette Plant. On April 9, 2009, the Department issued MAQP #2953-00 with the following mercury limits and operating requirements, which are also reflected in Operating Permit #OP2953-05 (the mercury provisions pursuant to ARM 17.8.771 are "State Only" provisions):

- Beginning January 1, 2010, emissions of mercury from the boiler shall not exceed 0.9 pounds mercury per trillion British thermal units (lb/TBtu), calculated as a rolling 12-month average (ARM 17.8.771).
- PPLM shall install a mercury control system that oxidizes and sorbs emissions of mercury. PPLM shall implement the operation and maintenance of the mercury control system on or before January 1, 2010 (ARM 17.8.771).

B. Monitoring Requirements

1. 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, a permit must require periodic monitoring 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 emissions 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.

The Department has determined that weekly visual inspections are appropriate for the fugitive emission units located at the facility. The method of demonstrating compliance includes a requirement to observe specific sites and to log the information. The log will be kept at the plant site and be available for review during inspections. The compliance demonstration requires verification that visual inspections were performed and they were recorded and a log maintained.

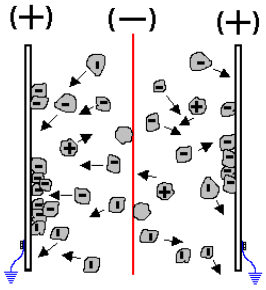
2. CAM Plan

The Department received additional information to update the CAM plan on March 29, 2012. Operating Permit #OP2953-07 includes this updated CAM Plan and the following is additional information to support and help clarify the CAM plan and the facility's control equipment.

PPL Montana Corette plant is a coal-fired boiler that utilizes an ESP to remove particulate matter (PM) from the flue gas exhaust streams. Opacity is a key performance indicator for assuring compliance with the PM limit. Opacity is measured in the stack on a continuous basis. Opacity data is collected and stored in the Data Acquisition and Handling System (DAHS). Six-minute, hourly, and daily averages are calculated based on minute data. As stated in the PPLM CEMS QA Plan, daily continuous opacity monitoring systems (COMS) calibration drift checks are conducted and quarterly opacity accuracy audits are conducted. PM emissions will be considered to be in compliance with the applicable limits when the opacity is ≤ 14% as measured on a daily average. Data regarding opacity monitoring is reported on a quarterly basis unless required otherwise during any excursion as required by Section V.E. of the permit. The Daily Average Opacity indicator is based on semi-annual performance tests that have indicated that the PM standard is met when opacity is ≤ 14%, as seen in the figure showing PPLM's PM emission tests in 2009-2011, which is in Appendix K of the permit. Corrective actions will be taken as necessary within each day when the day's daily building block average is above 14%. This will help ensure the daily average opacity remains at or below 14%. Currently the unit has a Monitor Labs USI 560 Lighthawk opacity monitor installed in the stack. Flue Gas Exit Temperature, Total ESP Powers, andCoal Ash Content are also parameters that will be monitored as indicators of the proper operation of the ESP. The plant control room operator will monitor these performance indicators on a continuous basis and take action to help prevent excursions of the performance indicators at the set ranges stated in Appendix K of the permit. A review of historical operating data indicates that the ESP is operating properly when the flue gas exit temperature is below 290°F, total ESP power is above 150 kilovolt-amperes (kVAs), and coal ash content is less than 10 lb/MMbtu.

The electrostatic precipitator

In 1905, a physics professor at the University of California, F.G. Cottrell, concluded a series of experiments that resulted in the development of the electrostatic precipitator. The process was so effective that its use has become widespread in industry and domestic applications today. The equipment is simple and contains essentially two pieces of material, one with a significant negative charge or excess of electrons, and the other grounded. The voltage between the two pieces could range from thousands to a hundred thousand volts. As a particle approaches the negatively charged part (wire, in Corette's case), it picks up an electrical charge or excess of electrons. This charged particle now migrates towards the grounded part (a collection plate) and attaches itself and gives up its excess electrons or charge to the plate. An occasional particle ends up with a lack of electrons or a positive charge associated with it. In this case, it will migrate towards the wire and be neutralized.



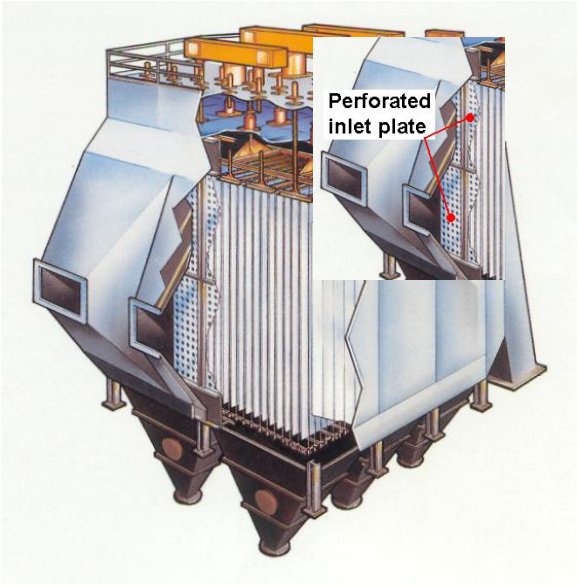
There are several essential elements to this precipitator that are necessary for it to work. These elements include:

1. A large enclosure,
2. Positive and negative wires and plates and lots of them,
3. A source of electrical potential,
4. Plenty of time for the charged particles to migrate from the wire to the plate,
5. A method of removing the particles from the collecting plates and wires,
6. A control system, and
7. Although not part of the precipitator, there must also be a method of removing the collected particles from the precipitator.

Precipitator Construction

This cutaway produced by the BHA Group, Inc., the suppliers of the plant rapper and power control systems, shows all the essential parts of the Corette precipitator.

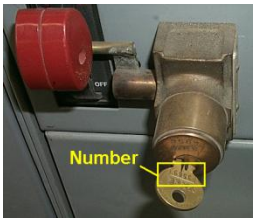
A large enclosure



There are a couple good reasons for the large enclosure, the precipitator being the second largest piece of equipment in the plant (not counting the stack). The enclosure is the passageway for approximately 600,000 cubic feet (ft^3) per minute of flue gas at a temperature slightly less than 300º F and under a slight positive pressure. The atmosphere inside the enclosure contains a mixture of CO_2, CO, NO_x, SO_x, moisture, strong electrical charges, abrasive small ash particles, and some excess O_2 etc. All of this is in the presence of heat and time could allow problems to occur. During normal operations, the enclosure, including the ash collection hoppers, must remain hot at all times. If not, the moisture will condense out and cause the ash particles to stick to the surfaces. The moisture will also mix with the SO_x (various forms of sulfur oxides), forming acids, oxygen, and metal to form rust. When the flue gas enters the precipitator enclosure, it passes through a perforated plate that distributes the gas flow through the precipitator, which makes more efficient use of the available space.

There is also a penthouse that houses transformer rectifier (TR) insulators and bolting for the suspended plates and wires. This penthouse is pressurized to minimize ash buildup and condensation. There are two sources of air for the penthouse; one source is from the discharge of the forced draft (FD) fan with an isolation valve at the discharge, and the second most frequently used is from the atmosphere and seal air fan on the precipitator roof.

Key interlock system

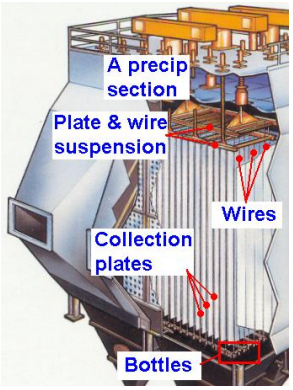


Another important part of the enclosure is to keep people out when the precipitator is in service because of the danger of electrical accidents. For this reason, the enclosure and entry into the TR units etc. is protected by a key interlock system. The key interlock system consists of numbered keys for each breaker and a numbered key for each access door into the TR units and the precipitator housing.

To open a door, each key from each TR unit breaker must be removed and placed in its numbered position in the key storage location. When all the keys are in place, they can be turned, releasing keys for the TR units. However, in this case the TR units must be grounded before opening the doors, which would require another set of keys.

The opposite is true when returning the keys. All the door keys must be returned and placed in its numbered position before the keys to the breakers can be released. The system is complicated because it is necessary that all the steps be taken to ensure safety. If it isn't done correctly, access can't be gained. There are some numbered keys that will open multiple doors where the doors have the same function. It is essential that these keys be returned to their proper location and that they are not lost. Losing a key is a serious matter. Not everybody is issued a spare key and obtaining a replacement requires management's assistance. In some cases a lost key can only be replaced from the interlock system manufacturer. This is not the case at Corette.

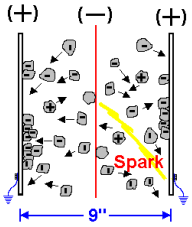
General ESP Configurations



The precipitator is divided in half and each half has three sections. Each section contains a series of collection chambers consisting of wire assemblies and collecting plants. There are 40 collecting plates with 36 wires between each set of plates. Each section is 9 inches wide between the plates, 9 feet deep and 30 feet tall. The precipitator contains a total of 160 collecting plates and 1872 wires or discharge electrodes.

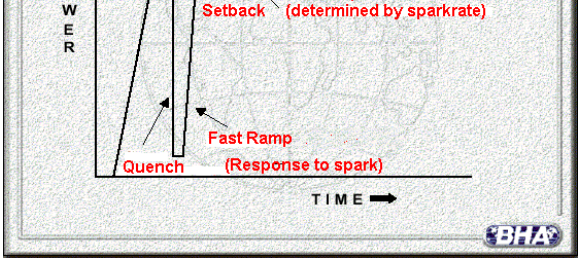
The wires are connected to a TR unit that supplies a DC source and each wire is maintained tight by a 15 or 25 lb weight or bottle attached to the bottom of each wire.

The wires are not straight round wires. Because they are required to ionize or charge flyash particles, they have sharp corners or points. These sharp corners and points aid in creating a corona, which is like an electron cloud, close to the wire through which the particle can pass and pick up a charge. Occasionally, wires break and fall into the ash hoppers. Broken wires also cause other problems and should be removed as soon as possible. The bottles will not fall because of the way they are attached to the precipitator.



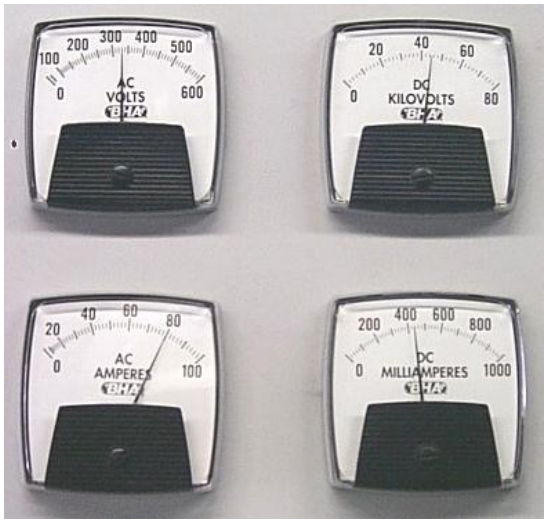
Source of electrical potential

Power is supplied to the precipitator wires by dual-purpose transformer rectifiers. The transformer portion increases the voltage from 480 volts to several thousand volts depending on what the computer controls require. The rectifier portion of the TR rectifies the AC to DC and is connected to the discharge electrodes. The control system varies the voltage going to the wires and keeps it as high as possible for as long as possible. There is a continuous flow of electrical current between the wires and plates as the flyash particles migrate from the wire to the plates. The greater the voltage difference, the better the particle charging and the more efficient the precipitator. However, once in a while a spark will jump the distance between the wire and plate, discharging or quenching the wire and stopping the particle charging action and migration. This is undesirable, but it is part of the process. The limit on this spark rate is 30 sparks per minute. Some sparking is necessary for good operation, but too much is damaging and loses efficiency. The controller attempts to charge the wire as high as possible for as long as possible. When a spark does occur, it recharges the wire as quickly as possible to just below the sparking threshold. It then continues at a slower charge rate until another spark occurs. This process maintains the maximum voltage difference. Since the efficiency of the precipitator depends on its ability to charge particles and help them migrate towards the collection plate, the ability of a particle to accept a charge is very important. This is referred to as resistivity or resistance to current flow. If the flyash particle will not accept a charge (high resistivity) it will not migrate to the collection plate and will not be removed from the gas stream. The ability of a particle to accept a charge depends on several things, including the sulfur (especially SO_3), sodium, calcium and magnesium content of the particle, and temperature. There are also other influencing factors. Sulfur, sodium, and high temperature lower resistivity while calcium, magnesium and low temperature raise resistivity. These elements are found in the coal being burned so the resistivity of the flyash depends and varies with the coal supply. In some cases it is necessary to add SO_3 or other compounds to the coal or flue gas to improve precipitator performance. These are very common practices.



The TR units are located on the roof of the precipitator structure and the controls for the units are in a small room adjacent to the precipitator just above the elevator 3rd floor.

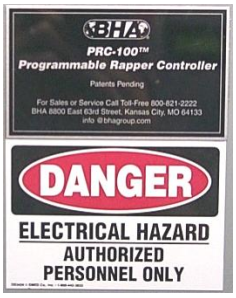
On the control panel there are four meters and a control panel. The meters show the applied AC and DC voltages and AC and DC the current flow. When a spark occurs, these meters will jump.



The other part of the control panel is the computer interface. During normal operations, the screen displays the TR status, whether it is fast charging, quenching, slow rate, or limited, and various other information about voltage and current flow.

Flyash particle migration time

One of the main reasons that the precipitator is so large is to allow the flue gas to slow down so it can pick up a charge at any one of the conducting wires and then have time to migrate to any one of the collection plates. If the gas velocity is too great, the particle will go through the precipitator without having a chance to attach itself to a plate. Another reason is to allow the particles to fall into the flyash hoppers. When the ash is knocked off the collection plates, it falls by gravity into the hoppers. If the velocity is too high, some of the ash will be swept away with the gases passing through the precipitator.



The collection plate and wire rapping system

When the flyash sticks to the collecting plate, it gives up its charge to the plate and lightly sticks. The process works the same with the wires, although they don't become nearly as loaded as the plates.

A very light tap on the plates will knock the ash off, allowing it to fall into the hoppers. The rappers are sequenced by a control system made by BHA Group, Inc. (BHA). A signal is produced by the system that tells the rapper when to rap and it ensures that only one rapper is rapping at a time. The rappers consist of a solenoid and a loose iron weight. When the system sends a rap signal to the rapper, the solenoid is energized and the iron weight is pulled into the canister. When the voltage on the solenoid is dropped, the weight also drops, tapping lightly on top of shafts that are connected to the wire and plate support beams inside the precipitator. The intensity and frequency is programmed into the computer to avoid too hard and too many rapping occurrences.

The precipitator control system

The BHA control system is a computer control system and allows the precipitator to operate automatically without operator action. The controls allow the precipitator to be in operation at all times, even when the unit is not on line, and adjusts the voltages and other functions accordingly.

Ash removal system

The ash removal system is not part of the precipitator, but it is essential that this system operation be done properly. The operation of the flyash removal system will be discussed in the ash removal section of the equipment manual. The ash in the hoppers must be removed regularly, if not constantly. Ash that is allowed to settle will cool, and moisture in the ash can condense and cause the ash to harden. A rodding port is installed in the hopper so it can be rodded as needed to remove the ash that might plug the feeder inlet.

Also, if the hoppers are allowed to overfill, they can interfere with the wires and bottles and cause them to become loose and possibly come in contact with the plates. This could result in burning and breaking the wires as well as other damage. Flyash level in the hoppers is monitored by Kay-Ray, Inc radioactive level detector, and an alarm sounds when the level becomes high. A panel on the wall will show which hopper is high. These hoppers are protected by a key interlock system also. It is necessary to close the radioactive source, as well as de-energize the hopper heating system, before entering the hopper.

REFERENCES for materials provided in PPLM response dated March 29, 2012:

PRC-100 Programmable Rapper Control, BHA Group, Inc., March 1997
Manual & Presentations CD, BHA Group, Inc, 1996, and the seminar manual and course outline
Power Guard S-300 Management System Automatic Voltage Control Operations Manual, BHA Group, Inc., Revision A July 1997
Operating and Instruction Manual for Cottrell Electrical Precipitators, Research-Cottrell, Inc.

3. Visual Surveys

The Department is requiring a weekly visual survey on several emitting units in the current permitting action. Please refer to the permit for specific language related to visual surveys. The Department also provided information in Section VI of this document in response to comments pertaining to visual surveys.

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, PPLM may elect to voluntarily conduct compliance testing to confirm its compliance status.

The mercury limit will be monitored using a Mercury Emission Monitoring System (MEMS) pursuant to Appendix L. The current permit action has included additional testing requirements for the JE Corette Boiler. PPLM will be required to conduct Method 5 or 5B particulate testing in conjunction with a Method 202 condensable particulate test on a semi-annual basis on the JE Corette Boiler.

D. Recordkeeping Requirements

PPLM is required to keep, as a permanent business record, each record listed in the Title V operating permit for at least five years following the date of the generation of the record. All source test recordkeeping shall be performed in accordance with the Montana Source Test Protocol and Procedures manual

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, PPLM 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 limits and monitoring deviations, the reason for any deviation, and the corrective action taken as a result of any deviation. PPLM is also required to submit quarterly reports as required by Section III.G of the permit.

F. Public Notice

In accordance with ARM 17.8.1232, a public notice was published in the *Billings Gazette* newspaper on or before May 16, 2011, for the draft issuance of Operating Permit #OP2953-06. The Department provided a 30-day public comment period on that draft operating permit from May 16, 2011, to June 15, 2011. ARM 17.8.1232 requires the Department to keep a record of both comments and issues raised during the public participation process.

The Department received comments from PPLM, Earthjustice on behalf of the Montana Environmental Information Center (MEIC) and the Sierra Club, and WildEarth Guardians. Pursuant to ARM 17.8.1232(3), all comments received during the public comment period were forwarded to PPLM to provide an opportunity to review and offer responses. PPLM submitted information, dated July 12, 2011, outlining responses to the comments. The Department summarized all of the comments received during the 30-day public comment period and prepared a response to each of them. These responses prepared by the Department are included in Section VI of this document.

As discussed previously in this document, the Department re-issued draft permit #OP2953-07 and, in accordance with ARM 17.8.1232, a public notice was published in the *Billings Gazette* newspaper on or before August 10, 2012. The Department provided a 30-day public comment period from August 10, 2012, to September 10, 2012. ARM 17.8.1232 requires the Department to keep a record of both comments and issues raised during the public participation process. On August 17, 2012, the Department received a request to extend the public comment period. The Department granted this request and approved a 14-day extension to the original 30-day public comment period. In order to be considered, the comments were to be received by September 24, 2012. A public notice of this comment period extension was published in the *Billings Gazette* newspaper on August 22, 2012.

The Department received comments from PPLM, and Earthjustice on behalf of MEIC and the Sierra Club. Pursuant to ARM 17.8.1232(3), all comments received during the public comment period were forwarded to PPLM to provide an opportunity to review and offer responses. The comments received by September 24, 2012, are summarized, along with the Department's responses, in Section VII of this document.

SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS

The Department reviewed the rules and regulations contained in Section 8 of the original application that PPLM identified as non-applicable. The Department included those rules and regulations that it agreed were non-applicable to the Corette plant in the operating permit in Section IV along with the reasons for non-applicability.

The Department did not, however, include as non-applicable all of the rules or regulations identified by PPLM. Rules and regulations that address procedural requirements and those that do not establish emission limits or applicable requirements on the facility were not included.

The following rules are not applicable to the facility due to the date of construction being after the affected facility applicability date in Subparts D and Y:of 40 CFR Part 60.

The Department also determined, based on the information supplied, that no preconstruction permit was previously required for the Corette facility because there were no changes to the facility since 1968 that triggered an increase in emissions of 25 tons or more per year. However, when mercury emission limitations were established under ARM 17.8.771, the facility was required to obtain a preconstruction permit (i.e., MAQP) specific to mercury control. MAQP #2953-00 was issued on April 9, 2009, to establish a mercury emission limit and associated operating requirements for the boiler in order to comply with ARM 17.8.771.

SECTION V. FUTURE PERMIT CONSIDERATIONS

A. MACT Standards (40 CFR Part 63)

PPLM's Corette facility is subject to the standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 63, Subpart DDDDD – *National Emissions Standards for Hazardous Air Pollutants for Major Industrial Sources: Industrial Commercial, and Institutional Boilers and Process Heaters* (the "Boiler MACT") because the facility includes an existing 31.5 MMBtu/hr auxiliary boiler. The current compliance date is March 21, 2014; however, EPA is working through efforts at reconsideration of the Boiler MACT at this time.

PPLM's Corette facility is subject to the standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 63, Subpart ZZZZ – *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* because the facility includes an existing 450 horsepower (hp) emergency engine/generator and an existing 94 hp emergency fire pump engine.

On February 16, 2012, EPA finalized the Mercury Air Toxics Standard (MATS) rule, also known as the Utility MACT, which was promulgated under 40 CFR 63, Subpart UUUUU – *National Emission Standards for Hazardous Air Pollutants: Coal and Oil-Fired Electric Utility Steam Generating Units*. PPLM's Corette facility is an affected source pursuant to this MACT standard, which has a compliance date of April 16, 2015.

B. NESHAP Standards (40 CFR Part 61)

As of the date of issuance of this proposed permit, the Department is not aware of any future NESHAP standards that may be promulgated that will affect this facility.

C. NSPS Standards

As of the date of issuance of this proposed permit, the Department is not aware of any future NSPS standards that may be promulgated that will affect this facility.

D. 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 Part 68 requirements three 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.

As of the date of issuance of this proposed permit, 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.

E. CAM Applicability

An emitting unit located at a Title V facility is subject to ARM Title 17, chapter 8, Subchapter 15 and must develop a CAM Plan for that unit if it meets the following criteria listed in ARM 17.8.1503:

- The emitting unit is subject to an emission limitation or standard for the applicable regulated air pollutant (unless the limitation or standard is exempt under ARM 17.8.1503(2));
- The emitting unit uses a control device to achieve compliance with such limit; and

- The emitting unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than major source thresholds.

The PPLM Corette facility meets the above criteria for PM. Refer to Appendix K of Operating Permit #OP2953-07 for the PM CAM plan and to Section III.B.2 of this document for additional information regarding the CAM plan.

F. PSD 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 the construction of 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 that 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 made on or after January 2, 2011.

Starting on July 1, 2011, PSD permitting requirements would be triggered for a modification that was determined to be major under PSD based on GHG emissions alone, even if no other pollutant triggered a major modification. In addition, a source that is not considered a PSD major source based on criteria pollutant emissions would become subject to PSD review if its facility-wide potential emissions equaled or exceeded 100,000 TPY of CO_2 equivalent (CO_2e) and 100 or 250 TPY of GHG on a mass basis depending on its listed status in ARM 17.8.801(22) and it 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, a source not currently holding a Title V permit that has 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.

Based on information provided by PPLM, PPLM's potential emissions exceed the GHG major source threshold of 100,000 TPY of CO_2e for both Title V and PSD under the Tailoring Rule.

G. Regional Haze

One of the principal elements of the visibility protection provisions of the FCAA is the provision in 42 U.S.C. Sec. 7491 addressing the installation of Best Available Retrofit Technology (BART) for certain existing sources. The FCAA defines the sources potentially subject to BART as major stationary sources, including reconstructed sources, from one of 26 identified source categories which have the potential to emit 250 tons per year or more of any air pollutant, and which were placed into operation between August 1962 and August 1977.The PPLM Corette facility was included under the list of sources potentially subject to BART.

On September 18, 2012, EPA adopted, as a final regulation, revisions to 40 CFR Part 52, Approval and Promulgation of Implementation Plans; State of Montana; State Implementation Plan and Regional Haze Federal Implementation Plan (FIP). See 77 FR 57863-57919. The final rule is effective October 18, 2012. The EPA promulgated the FIP to address regional haze in the State of Montana and this final rule making will affect the PPLM Colstrip facility. Within the rule, compliance with BART PM limitations, specifically for Units 1 and 2, must be achieved by November 17, 2012. Compliance with specific SO_2 and NO_x limitations set forth within the FIP must be achieved within 180 days after the effective date of the FIP where installation of additional controls is not necessary to comply with the BART limit.

SECTION VI. DRAFT PERMIT #OP2953-06
SUMMARIZED COMMENTS AND DEPARTMENT RESPONSES

The following comments were received during the 30-day public comment period provided following the issuance of Draft Operating Permit #OP2953-06 (issued May 16, 2011). As a note to the reader, all references to specific permit condition numbers within the text of the comments pertain to Draft Operating Permit #OP0513-07. Various changes incorporated into Draft Operating Permit #OP0513-08 may have resulted in changes in condition numbering.

1. Request for revision of prompt reporting requirements
PERMIT SECTION and/or TOPIC: Section V.E.
COMMENT: The Title V Permit does not appear to require prompt reporting of permit deviations in accordance with the Clean Air Act. Of concern is that although Section V.E requires reporting of deviations, it does not appear that such reporting is sufficiently prompt and satisfies Title V requirements. In this case, the draft Title V Permit only requires reporting of deviations within 30 days, and even then only for deviations that "may result in emissions potentially in violation of permit limitations." 30 days does not appear to be prompt, nor does it appear to reflect any consideration of degree and type of deviation likely to occur and the applicable requirements. Although the provision does require an initial notification within 24 hours of deviations that "may result in emissions potentially in violation of permit limitations," an initial notification does not satisfy prompt reporting requirements. We strongly urge the DEQ to require prompt reporting of permit deviations within a timeframe similar to that established by EPA and other states. We are further concerned that it is unclear under what circumstances the 30 day reporting requirement would even apply. According to Section V.E, deviations "which may result in emissions potentially in violation of permit limitations" are the only deviations subject to the 30 day reporting requirement. Unfortunately, the phrase "which may result in emissions potentially in violation of permit limitations" is unclear, vague, and could be interpreted to allow the polluter to avoid reporting emission violations within 30 days. We strongly urge the DEQ to simply require prompt reporting of all deviations related to excess emissions, and to ensure that deviations related to hazardous or toxic air pollutant emissions occur within 24 hours and that deviations related to other pollutant emissions occur within 48 hours. [WildEarth Guardians 6/15/2011, comment 1]

DEPARTMENT RESPONSE: The Department disagrees that the initial notification within 24 hours "does not satisfy prompt reporting requirements." The language "for deviations which may result in emissions potentially in violation of permit limitations" is intended to cast a wide net for any deviation which has the possibility of violating a permit condition. This broad interpretation was taken by the Department because in some cases (a process upset, for example), the regulated facility may not know immediately if a permit limit would be violated, only that the possibility exists. Therefore, the language would cover (and has covered) many more situations where the potential exists for the violation of a limit, not just where a confirmed violation has taken place. Because of this broad interpretation facilities are, in fact, doing some over reporting, and in some cases are retracting initial deviation reports after realizing that no limits were violated or deviations occurred. The initial notification is required to be followed up with additional information within 30 days because often within that initial 24-hour period, the probable cause and/or specific corrective action taken (or to be taken) is not known with certainty. As with any reporting, if the Department needs more information "to protect public health and safety as well as to provide a forewarning of potential problems" from the initial 24-hour notification, the compliance inspector would require that additional information at that time.

Colorado's Air Pollution Control Division (cited by the commenter) requires reporting of hazardous/toxic air pollutants within 24 hours only if "emissions… continue for more than an hour in excess of permit requirements" and of other regulated air pollutants within 48 hours "if emissions… continue for more than two hours in excess of permit requirements." In comparison to Colorado's language, Montana's language requires reporting of emissions that "may" cause a violation of a permit condition (again, casting a broader net to include those that have the possibility of a violation if not immediately known) for any period of time.

40 CFR 70.6(a)(3)(iii)(B) directs permitting authorities to "define 'prompt' in relation to the degree and type of deviation likely to occur and the applicable requirements." The Department's language does that by focusing resources on those deviations that "may" violate permit conditions. Other types of deviations, generally administrative in nature that would not have environmental impacts, require reporting within 90 days. In addition, Montana has a malfunction rule that requires the following (under ARM 17.8.110):

> "(2) The department must be notified promptly by telephone whenever a malfunction occurs that is expected to **create emissions in excess of any applicable emission limitation** *[emphasis added]*, or to continue for a period greater than four hours. If telephone notification is not immediately possible, notification at the beginning of the next working day is acceptable. The notification must include the following information:
> (a) identification of the emission points and equipment causing the excess emissions;
> (b) magnitude, nature, and cause of the excess emissions;
> (c) to the extent known, time and duration of the excess emissions;
> (d) description of the corrective actions taken or expected to be taken to remedy the malfunction and to limit the excess emissions;
> (e) information sufficient to assure the department that the failure to operate in a normal manner by the air pollution control equipment, process equipment, or processes was not caused entirely or in part by poor maintenance, careless operation, poor design, or any other preventable upset condition or preventable equipment breakdown; and
> (f) readings from any continuous emission monitor on the emission point and readings from any ambient monitors near the emission point."

ARM 17.8.110(5) also requires that "within one week after a malfunction has been corrected, the owner or operator must submit a written report to the department…"

Combined with the prompt deviation reporting required under other applicable requirements (MACT standards, etc.) and the Malfunction Rule, the Department believes Montana's prompt reporting requirements as listed in Section V.E. satisfy the prompt reporting requirements under ARM 17.8.1212(3)(b) and 40 CFR 70.6(a)(3)(iii)(B).

2. Request to fully address any and all recent violations
PERMIT SECTION and/or TOPIC: TRD I.F. Compliance Designations
COMMENT: **a.)** We are concerned that the Title V Permit lacks a necessary schedule of compliance in light of recent violations of the Clean Air Act at the Corette power plant. According to EPA's Enforcement and Compliance History Online (ECHO) database, there are unaddressed violations at the Corette power plant during the first and second quarters of 2011. Furthermore, according to the ECHO database, the Corette power plant failed a stack test in December of 2010 and deviations were reported as of March 8, 2011. The database also indicates that the State of Montana issued a notice of violation over Clean Air Act violations at the Corette power plant on March 22, 2011. **b.)** If there are any ongoing violations at the Corette power plant, the Title V Permit must contain a schedule with milestones to bring the facility into compliance in accordance with Title V regulations. If these violations have been resolved, then the Title V Permit must incorporate the terms of any consent decree, settlement agreement, or other order to ensure that all applicable requirements are incorporated into the Title V Permit. We request the DEQ fully address any and all recent violations in any Title V Permit. **c.)** We are also concerned that the draft Title V Permit may lack a compliance schedule to bring the boiler at the Corette power plant into compliance with New Source Review ("NSR") requirements under the Clean Air Act. We are aware that in 2000, the EPA requested information from PPL regarding the Corette power plant in an effort to assess whether the plant was in violation of NSR requirements. Additionally, there have been a number of emissions increases, particularly in NOx and SO_2, at the Corette plant over the years, as well as apparent increases in heat input, indicating that major modifications may have occurred at the facility, thereby triggering applicable NSR requirements. For example, according to EPA Clean Air Markets data, between 2002 and 2003, heat input increased by nearly 2,000,000 mmBtu and

annual NOx and SO_2 emissions increased by 494 and 569 tons, respectively. We request the DEQ access this information, as well as information gathered by the EPA and other relevant sources, in order to ensure that the Title V Permit assures the Corette power plant will comply with any applicable NSR requirements and, if necessary, include a compliance schedule to bring the facility into compliance with NSR. In order to ensure compliance with Title V requirements, it is critical that the DEQ investigate whether NSR requirements have been triggered and if so, to ensure such requirements are incorporated into the Title V Permit. [WildEarth Guardians 6/15/2011, comment 2]

DEPARTMENT RESPONSE: **a.)** As the commenter noted, on December 6, 2010, the Corette power plant failed a particulate stack test. On March 22, 2011, the Department issued a violation letter to PPLM regarding that emissions violation. Formal enforcement was taken and on February 2, 2012, an Administrative Order on Consent (AOC) was signed. The violation was considered closed as of July 5, 2012, when the Department determined all terms of the AOC had been met. The settlement included a Supplemental Environmental Project that included paving approximately 13,000 square feet of gravel at the PPLM facility, and the remainder of the settlement was a cash penalty payment of $8,000. The AOC did not contain any provisions that need to be added to the Title V permit. Violations continue to show in EPA's database until the Department formally resolves the violations with an order. The December 6, 2010, emissions violation was still showing up in the EPA's Enforcement and Compliance History Online database in the 2011 because the Department and PPLM had not finalized the AOC for the violation. Violations are often resolved well before the addressing actions will show up in the federal database. This stack test failure was a one-time event that has since been corrected, and the Corette plant has passed a particulate stack test since the failed test. This issue does not represent an ongoing violation.

The deviations referenced by the commenter appear to refer to opacity deviations from the PPLM Corette boiler. Opacity from the boilers is measured with COMS. In those instances where opacity deviations have been reported by PPLM at the Corette facility, the Department has reviewed the explanation of the deviations and the percentage of operating time for the deviations. The Department has found the data to show that <5% of the time the COMS measure exceedances of the allowable limits. In most instances, the COMS measure exceedances of the allowable limits <1% of the operating time. EPA has issued various guidance statements on how deviations measured with continuous monitors might be addressed. In a September 29, 1993 CEM Enforcement Guidelines memo, EPA identified recommended enforcement follow-up actions for various percentages of excess emissions (<5%, 5-10%, and >10%). The Department considers this information in evaluating opacity exceedances that are measured by COMS. Furthermore, the Air Facility System (AFS) Business Rules Compendium (Version 4.1, August 2009) also addresses this issue for High Priority Violations (HPV) regarding opacity standards. Except for opacity readings substantially over the limit, EPA uses percentage of operating time above a limit as an HPV consideration. EPA only recommends HPV action for opacity exceedances that are >5% of the operating time or > 3% of the operating time for two consecutive quarters. The Department also considers this EPA recommendation when evaluating opacity exceedances. The Department has regularly assessed PPLM's compliance with limits that are measured with COMS. The Department has found that PPLM has taken adequate steps to enhance its emission controls over time and that PPLM's percentage of time in excess of reference limits is lower than EPA's recommended action levels. The Department does not believe that the deviations reported by PPLM trigger any need for changes to the Title V permit because the deviations occur for such a small percentage of the operating time.

The Department has updated the Technical Review Document (TRD) to further clarify the questions raised in the comment. The following text was added. "*The PPLM facility was last inspected on April 22, 2010. A Full Compliance Evaluation (FCE) was conducted on May 3, 2010. At the time of the inspection and FCE, the facility was found to be in compliance with all applicable requirements. On December 6, 2010, the second semiannual particulate compliance test for 2010 was conducted. Preliminary results reported on December 13, 2010 indicated particulate emissions were higher than the allowable level. Immediate action was taken by lowering the plant load to 150 MW gross, a level at which compliance with the particulate emission standard was demonstrated in July 2010. On December 14, 2010, a series of diagnostic particulate tests was performed which confirmed particulate emissions were within the allowable level at that load (150 MW gross). On December 16, 2010, final results from the December 6, 2010 test were received which did confirm particulate emissions higher than the allowable level. Plant operations were limited to 125 MW gross from December 17, 2010, to January 10, 2011 due to coal mill repairs. On December 20, 2010, another particulate compliance test was conducted at 125 MW gross*

which showed particulate emissions within the allowable level. On January 12, 2011, a particulate compliance test was conducted at 150 MW gross. It also showed compliance with the particulate standard at this self-imposed load limitation. Another particulate compliance test was conducted at 155 MW gross on February 10, 2011. Those results indicated particulate emission within the allowable level. "

b.) The commenter believes that the Title V permit should contain a schedule with milestones to bring the facility into compliance in accordance with Title V regulations and that the Department should fully address any and all recent violations. Please note the response to comment 2.a. The Department has addressed, and continues to address, those violations that are discovered at the PPLM Corette facility. Each violation that is discovered by the Department is reviewed and analyzed on a case-by-case basis. The Department uses its discretion to determine the most appropriate way to deal with permit violations and/or permit deviations. As appropriate, the Department takes formal enforcement actions to address those violations deemed substantial by the Department. The issues leading to the violation for the December 6, 2010, failed stack test have been addressed. The violation does not represent an ongoing violation.

c.) The commenter believes that the draft Title V permit must ensure the Corette power plant will comply with any applicable New Source Review (NSR) requirements and include a compliance schedule to bring the boiler into compliance with NSR requirements. The Department is not aware of any actions that have taken place that would trigger the NSR requirements for the boilers at the Corette facility. The Department has not received any information from EPA indicating that NSR violations occurred at the PPLM Corette facility. Changes in emissions and/or heat input do not necessarily trigger NSR requirements. For example, the actual emissions inventories for nearly every permitted facility in Montana vary from year to year because natural variation exists within all process operations. The Department is not aware of any unaddressed NSR actions at the PPLM Corette facility. Furthermore, PPL Montana has certified in its Title V permit application that it is "in compliance" with all applicable air quality requirements. Also, within EPA's Order Responding to Practitioner's Request that the Administrator Object to Issuance of a State Operating Permit (Petition Number: VIII-2010-XX),[1] EPA responded to the issue of the Title V permit failing to ensure compliance with PSD requirements. EPA offered the following response:

> *"…the EPA notes that it is important to first address what is required to trigger PSD applicability. PSD applies to both the construction of new major stationary sources and major modifications of existing major stationary sources. The issue raised by Petitioner is whether various changes that allegedly took place at Pawnee constituted a major modification. Under the Colorado SIP, a major modification is any physical change in the method of operation of, or addition to, a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Federal Act or the Act. To determine whether a net emissions increase (and thus a major modification) would occur, the Colorado SIP requires: (1) a determination of the actual emissions increase that would result from a particular physical change or change in the method of operation; and (2) a determination of any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable. In a petition to object, the burden is on the petitioner to supply information sufficient to demonstrate the validity of each objection raised. CAA section 505(b)(2), 42 U.S.C. §7661 d(b)(2)."*

The Department finds this language applicable in response to the subject comment. The commenter has provided insufficient information indicative of noncompliance with NSR requirements.

[1] In the matter of Public Service Company of Colorado, dba Xcel Energy, Pawnee Station, Permit Number: 96OPMR128, Issued by the Colorado Department of Public Health and Environment, Air Pollution Control Division. Signed June 30, 2011.

3. Insufficient Opacity Monitoring (ash and coal handling systems, coal piles, and plant roads).
PERMIT SECTION and/or TOPIC: Compliance Demonstration III.B.4 (also applicable to Compliance Demonstrations III.D.5, III.E.3, and, III.I.3)
COMMENT: **a.)** The draft Title V Permit requires insufficient periodic monitoring to ensure compliance with applicable opacity limits for these activities. In particular, although the permit allows the polluter to conduct a weekly visual survey of visible emissions from the ash handling operations, coal handling operations, the coal piles, and plant roads, it also allows the polluter to simply conduct a Method 9 source test once every six months and forego any weekly monitoring. Allowing Method 9 monitoring once every 6 months does not appear to assure compliance with applicable opacity limits. **b.)** Technically, the draft Title V Permit does not even require the polluter to monitor for opacity even if visible emissions are observed from ash handling, coal handling, coal storage piles, and plant roads. It does not appear as if the monitoring set forth is sufficient to ensure that any potential exceedances or violations are detected, recorded, and reported as required. **c.)** It is unclear *where* any visual surveys of visible emissions or Method 9 tests would actually occur in relation to the ash handling, coal handling, coal storage piles, and plant roads. The Title V Permit does not specify where such monitoring should take place in order to assure compliance with the applicable opacity limits. [WildEarth Guardians 6/15/2011, comment 3a and Earthjustice, 6/15/2011, comment IV]

DEPARTMENT RESPONSE: **a.)**The commenter has expressed concerns with the adequacy of the draft permit's monitoring requirements for the ash handling system, coal handling system, coal piles, and plant roads. The draft permit condition from #OP2953-06 stated: "*PPLM may not cause or authorize emissions to be discharged into the outdoor atmosphere from any source that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)).*" The associated compliance demonstrations for this condition state: *"PPLM shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions. Under the visual survey option, once per calendar week, during daylight hours, PPLM shall visually survey the System for any visible emissions. If visible emissions are observed during the visual survey, PPLM must conduct a Method 9 source test…."*

The intent of the Title V permit is to require PPLM to conduct weekly visual surveys of the ash handling system, and the Department has changed the wording of Section III.B.4 to clarify its intent: *"PPLM shall conduct a weekly visual survey of visible emissions on the Ash Handling System. Under the visual survey option, once per calendar week, during daylight hours, PPLM shall visually survey the Ash Handling System for any visible emissions. If visible emissions are observed during the visual survey, PPLM must conduct a Method 9 source test."* Similar wording has been included in Sections III.D.5, III.E.3, and III.H.3 corresponding to the coal handling system, the coal piles and the plant roads.

The primary method to reduce particulate matter emissions, including opacity, from the ash handling system is the use of pneumatic transfers, dustless slides, load-out chutes, water application, and fabric filters. On the coal handling systems, particulate control includes load out chutes with telescopic spout and fabric filters. In addition, the Department would like to note that although the opacity standard specified in Section III.B.1 is 20% or greater, the compliance demonstration specifies that if visible emissions meet or exceed 15% opacity (more conservative than 20%) based on the Method 9 source test, PPLM shall immediately take corrective action to contain or minimize the source of emissions. The Department believes that the compliance demonstration including the change in wording discussed above meets the intent of the administrative rules of Montana and is adequate to ensure compliance with applicable opacity limits established in the draft Title V permit. In reference to controls installed on the coal handling system at PPLM, EPA has taken a position on a similar case where it supported the position that Method 9 testing is adequate where coal handling systems are enclosed and coal fugitives are controlled with water spray in its response in the Dynergy Order *(See In the Matter of Dynergy Northeast Generation,* Petition Order II-200 1-06 at 11 (February 14, 2003)).

b.) The commenter is concerned that the draft Title V permit does not require the permittee to monitor for opacity even if visible emissions are observed from ash handling, coal handling, coal storage piles, and plant roads, and that the monitoring set forth is not sufficient to ensure that any potential exceedances or violations are detected, recorded, and reported as required. It is not feasible to monitor fugitive emissions from coal piles, plant roads, and coal and ash handling systems continuously, and the frequency of significant emissions from these sources is very low. However, part of the intent behind requiring visual

surveys on emitting units is encouraging facilities to become more aware of day-to-day operation and fluctuations within their processes and how those operations affect visible emissions, which generally results in more proactive operation and less visible emissions overall. With respect to the ash handling system, it is inspected weekly as part of Corette's general fugitive source monitoring in the same manner as other fugitive sources under the draft permit. In addition, the bags for the ash tanks are routinely inspected and replaced as necessary. Section III.B.4. states: *"If visible emissions are observed during the visual survey, PPLM must conduct a Method 9 source test"*, and continues with: *"The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 15% opacity based on the Method 9 source test, PPLM shall immediately take corrective action to contain or minimize the source of emissions…. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken."* Section III.B.13 (under "Reporting Requirements") states: *"The semiannual monitoring report shall provide (ARM 17.8.1212):*

a. *a summary of any visual surveys and corrective actions taken, and the results of any Method 9 tests that were performed and logged during that semiannual period as specified by Section III.B.4 and III.B.8."*

The Department believes that Sections III.B.4 and III.B.12 adequately require follow-up monitoring of a source if visible emissions are observed during the weekly visual survey and ensures that any potential exceedances or violations are detected, recorded, and reported as required.

c.) The commenter is concerned that the draft Title V permit does not specify **where** any visual surveys of visible emissions or Method 9 tests would actually occur in relation to the ash handling, coal handling, coal storage piles, and plant roads. The Title V permit Section III.B.4 states: *"Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual…"* Section 3.11, Source Test Procedures for the Determination of Opacity of the Montana Source Test Protocol and Procedures Manual, states that the acceptable method is EPA Method 9, and that alternate methods include EPA Alternate Method 1(LIDAR) and EPA Method 22. The Visible Emissions Field Manual, EPA Methods 9 and 22, EPA 340/1-92-004, December 1993, provides clear specifications for the observer's appropriate position while conducting both the Method 9 test and the Method 22 Visual Survey test as follows:

> Appendix B Method 9-Visual Determination of the Opacity of Emissions from Stationary Sources
> 2.1 Position. The qualified observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140º sector to his back. Consistent with maintaining the above requirement, the observer shall, as much as possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction and, when observing opacity of emissions from rectangular outlets (e.g. roof monitors, open baghouses, noncircular stacks), approximately perpendicular to the longer axis of the outlet. The observer's line of sight should not include more than one plume at a time when multiple stacks are involved, and in any case the observer should make his observations with his line of sight perpendicular to the longer axis of such a set of multiple stacks (e.g., stub stacks on baghouses).
> Section 2.3 Observations. Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. The observer shall not look continuously at the plume, but instead shall observe the plume momentarily at 15-second intervals.
>
> Appendix C Method 22 – Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares.
> Section 5.1 Position. Survey the affected facility or building or structure housing the process to be observed and determine the locations of potential emissions. If the affected facility is located inside a building, determine an observation location that is consistent with the requirements of the applicable regulation (i.e., outside observation of emissions escaping the building/structure or inside observation of emissions directly emitted from the affected facility process unit). Then select a position that enables a clear view of the potential emission point(s) of the affected facility or of the building or structure housing

the affected, as appropriate for the applicable subpart. A position at least 15 feet, but not more than 0.25 miles, from the emission source is recommended. For outdoor locations, select a position where the sun is not directly in the observer's eyes.

Through reference to the Montana Source Test Protocol and Procedures Manual and Visible Emissions Field Manual EPA Methods 9 and 22, EPA 340/1-92-004, December 1993, the Title V permit adequately specifies the observer's location for proper implementation of the Method 9 and Method 22 (visual survey) tests, and as such, meets the intent of the administrative rules of Montana and is adequate to ensure compliance with applicable opacity limits established in the draft Title V permit.

4. Opacity monitoring of the internal combustion engines (vehicles).
PERMIT SECTION and/or TOPIC: Condition III.G.1
COMMENT: This condition apparently establishes opacity limits for vehicles. However, the condition does not identify the specific vehicles subject to these opacity limits or state how frequently opacity monitoring is to be conducted. Does this standard apply to all vehicles, including all locomotives, non-road vehicles, passenger vehicles, and heavy and light duty trucks? The condition must specify with greater specificity exactly what sources are subject to the opacity requirements and provide greater detail as to the frequency of opacity monitoring in order to ensure the Title V Permit assures compliance with the applicable requirements. [WildEarth Guardians 6/15/2011, comment 3b]

DEPARTMENT RESPONSE: ARM 17.8.304 (4)(c)states that *"This rule does not apply to emissions from motor vehicles."* The Department does not have the authority to enforce permit conditions on internal combustion engines (referring specifically to vehicles) (EU6) and has removed reference to this emitting unit in the operating permit.

5. Inadequate Monitoring of Particulate Matter
PERMIT SECTION and/or TOPIC: Compliance Demonstration III.H.20
COMMENT: **a.)** The draft Title V Permit only requires monitoring for particulate matter ("PM") emissions once every six months. This is too infrequent and does not appear to ensure compliance with the applicable PM limits, in particular the pound/hour limits. Although the facility is subject to compliance assurance monitoring ("CAM") requirements (to monitor opacity), it is unclear how the CAM plan will ensure compliance with the PM limits. **b.)** Although the CAM plan relies on a 23% opacity indicator (measured as a three-hour average), there is no data showing that this is a reasonable and accurate threshold for assessing PM emissions and potential exceedances. **c.)** It is unclear whether the three-hour rolling opacity average is based on a rolling average of six-minute intervals, or whether it is based on hourly averages. **d.)** Further, it is unclear how a three-hour rolling opacity average will serve to assure compliance with hourly PM limits set forth in the Montana SIP. The Title V Permit needs to be more explicit. **e.)** Finally, it is unclear how the polluter will respond to remedy excursions from the 23% opacity indicator in order to ensure compliance with PM limits. [WildEarth Guardians 6/15/2011, comment 3c]

DEPARTMENT RESPONSE: **a.)** The Draft Title V permit does not contain pound/hour particulate limits. The Draft Title V Permit #OP2953-06 Section III.H.3. stated that "*Emissions shall not exceed the value calculated using* $E = 0.882 * H^{-0.1664}$*, where H is the heat input capacity in MMBtu per hour and E is the maximum allowable particulate emissions rate in lbs per MMBtu (ARM 17.8.309),* and Section III.H.4 stated that "*PPLM shall not cause to be discharged into the atmosphere particulate matter in excess of 0.26 lb/MMBtu (ARM 17.8.749)."* The associated compliance demonstration, Section III.H.20., states: *"PPLM shall perform a Method 5 or 5B particulate matter test semiannually during periods the equipment is in operation to monitor compliance with the particulate matter limit in Sections III.H.3 and III.H.4. The testing shall be performed in accordance with the Montana Source Test Protocol and Procedures Manual."* The Department requested that PPLM review and update the CAM plan. PPLM submitted a revised CAM plan that was received on March 29, 2012. The Department believes the updated CAM plan, including additional performance indicators, the semiannual compliance source testing of PM, in addition to the current continuous opacity monitoring as included in the CAM plan, provides adequate frequency to ensure compliance with the PM limits. Also, the Department has determined that it is ARM 17.8.309 that applies on an ongoing basis. Section III.H.4 was a one-time calculation that should not

have been placed in the permit because the value only reflected the allowable emissions at the given heat input that was used. Therefore, Section III.H.4 has been removed. Note due to the removal of EU6 (Section III.G) the section that refers to this emitting unit is now Section III.G in the draft permit OP2953-07.

b.) The commenter is concerned that the CAM Plan does not ensure compliance with the PM limits. Please see the updated CAM plan in the permit and the above information in reference to updated performance indicators in the updated CAM plan, as well as additional information included in Section III.B.2 of this document, which contains further information on the operation of an ESP. Opacity is a performance indicator for ensuring compliance with the PM limit at the PPLM Corette facility. Percent opacity data is recorded as minute averages in the data acquisition system. Six-minute, hourly, 3-hour, and daily averages are calculated utilizing the base minute data. PPLM has included additional performance indicators of the flue gas exit temperature, total ESP powers, and coal ash content. The Department believes, based on the updated CAM plan, which includes additional performance indicators, that PPLM has adequately demonstrated that these indicators as well as the continuous opacity monitoring provides adequate correlation with PM emissions.

c.) The rolling 3-hour opacity average is based on hourly averages. Every new clock hour will result in the calculation of a new rolling 3-hour average opacity value. Depending on the COMS downtime, or potentially other downtime in an hour, an hourly value could be based on less than 60 minutes.

d.) The draft Title V permit contains two approaches to assure compliance with the PM limit: semi-annual performance testing (Method 5 or 5b) and a CAM plan. The Department is issuing a revised and updated CAM plan with additional performance indicators. As intended, the CAM plan provides monitoring indicators that demonstrate whether the control equipment is operating effectively. As stated by EPA, the design principles of CAM are *monitoring sufficient to provide a reasonable assurance of compliance with the applicable requirements (e.g., emissions limits) and to ensure operators pay the same level of attention to pollution control measures as to production activities (http://www.epa.gov/ttn/emc/cam.html,* posted October 20, 2004). The compliance demonstration in Section III.G.25 states: *"PPLM shall monitor compliance by following the Compliance Assurance Monitoring (CAM) Plan (Appendix K)..."* CEMS are not required by any EPA or State regulation applicable to the source and the commenter fails to demonstrate that additional monitoring, including CEMS, is necessary to ensure compliance with the emissions limits of the Permit. The Department believes that the semiannual compliance monitoring of PM, in addition to continuous opacity monitoring and additional CAM plan performance indicators, provides adequate frequency to ensure compliance with the PM limits.

e.) The commenter stated that "it is unclear how the polluter will respond to remedy excursions from the 23% opacity indicator in order to ensure compliance with PM limits." The Title V permit includes the Operation Modification Plan - Revision 4 and Revision 5 update in Appendix J (revised based on changes to the CAM plan). The Operation Modification Plan – Revision 4 Revision 5 update contains descriptions of how PPLM will operate in terms of actions associated with opacity and other plant parameters. Also, PPLM is required to apply ARM 17.8.1513, which in summary requires the facility to report for monitoring, at a minimum, the information required under ARM 17.8.1212(3)(b) and (c) and summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable.

6. Inadequate Monitoring of Particulate Matter (continued, comments from Earthjustice)
COMMENT: **a.)**The draft operating permit fails to require monitoring of particulate matter ("PM") sufficient "to assure compliance with the permit terms. The draft permit would require PM-emissions monitoring through Method 5 or Method 5b – a semi-annual stack test for filterable PM… This monitoring is inadequate…" The commenter states that "Corette's PM-emissions limits apply to total particulate and the permit must establish compliance with these limits based upon methods that test for total particulate. Methods 5 and 5b test for filterable PM only; they are not designed to test for emissions of condensable PM. DEQ must require monitoring of total particulate— including both filterable and condensable particles—using test methods such as Method 202 or a combination of Methods 202 and 201A, to establish compliance with the total particulate emissions limit… If the Corette boiler PM-emissions limits are intended to limit only filterable PM emissions, the permit should clarify this

condition and provide an adequate justification for this interpretation in the Statement of Basis." **b.)** The commenter states that the Corette title V operating permit must require a compliance demonstration for all 8,760 hours in the year, not just the six hours required to perform two Method 5 or 5b stack tests per year. **c.)** The commenter is concerned that a 3-hour, semi-annual stack test is insufficient to demonstrate continuous, or even hourly compliance with the applicable PM limits. The frequency of monitoring must bear some relationship to the time period for the emission limits established in the permit… the permit should require a continuous emissions monitoring system for PM. Existing technology is available to continuously monitor PM. [Earthjustice (MEIC/Sierra Club) 6/15/2011, comment 1]

DEPARTMENT RESPONSE: **a.)** The commenter is concerned that semiannual PM emissions monitoring Methods 5 and 5b are inadequate because they do not measure *total* particulate. PPLM does test back-half emissions for the Corette facility when conducting testing and the permit has been clarified to require this. EPA revised the Montana State Implementation Plan on January 16, 1986 to revise the Source Test Procedures, stating: *"Montana's source test procedures are generally those of Appendix A of 40 CFR Part 60. The revisions approved today: allow the State to specify alternate procedures where appropriate; allow the State to require the "back half" be included in particulate measurements for sources not subject to Federal New Source Performance Standards; and include language in the Montana plan which provides for enforcement of State source testing requirements."* The back-half (condensable fraction) of the PM emissions are determined utilizing test Method 5 during the PPLM semi-annual testing. Since the Department was already requiring back-half testing for PPLM, the determination has been made to require both Method 5 or 5B in conjunction with Method 202 testing semi-annually, and the permit has been updated to reflect this change.

b.) See response to comment 5 above.

c.) The commenter mentions the necessity of requiring continuous PM monitoring for all 8,760 hours in the year. See response to comment 5 above as well as EPA's Order Responding to Petitioner's Request that the Administrator Object to Issuance of a State Operating Permit (Petition Number: VIII-2009-01)[2]. In that Order, EPA indicated that "A title V permit must include all applicable requirements. *See* 40 C.F.R. 70.5(c)(4). It must also include monitoring necessary to assure compliance with applicable requirements. *See* CAA §§ 504(a); *see also* 40 C.F.R. 70.6(c)(I). Petitioner fails to identify any applicable requirement that requires the use of PM CEMS for monitoring compliance with the PM limit. Petitioner also has not alleged or demonstrated that PM CEMS are the only monitoring that can assure compliance with the PM limit and therefore must be included in the title V permit." EPA further stated that "Petitioner fails to demonstrate that PM CEMS is required as an applicable requirement or as monitoring necessary to assure compliance with an applicable requirement. Therefore, I deny the petition on the issue that the Hayden Power Station title V permit must include PM CEMS to assure compliance with the boilers' PM limit." The Department concurs and finds this language applicable in response to the comment.

7. Process Weight Rule. PERMIT SECTION and/or TOPIC: Conditions III.A.7, A.8, G.2, J.2
COMMENT: The draft Title V Permit does not appear to set actual particulate matter limits for a number of sources. For example, although the draft Title V Permit limits PM from the coal handling system, the permit states only that PM emissions must be limited to no more than "E = 55.0 * P0.11 – 40, where E = emissions in pounds per hour and P = process weight rate in tons per hour." Draft Title V Permit at 10. Similarly, Section III.A.7 and A.8 only set forth equations for calculating emissions, but no actual limits on PM. Fundamentally, this seems at odds with the Montana State Implementation Plan ("SIP"), which sets explicit limits on PM emissions at ARM 17.8.308-310. In particular, ARM 17.8.310 sets explicit pound per hour limits. The Title V Permit does not appear to ensure compliance with those and other applicable PM limits. [WildEarth Guardians 6/15/2011, comment 4a]

[2] In the matter of Public Service Company of Colorado, dba Xcel Energy, Hayden Station, Permit Number: 96OPRO132, Issued by the Colorado Department of Public Health and Environment, Air Pollution Control Division. Signed March 24, 2010.

DEPARTMENT RESPONSE: Sections III.A.7, A.8, G.2, and J.2 of the draft Title V permit OP2953-06 each reference ARM 17.8.309 or ARM 17.8.310. ARM 17.8.309(2) states: *"When the heat input falls between any two consecutive heat input values in the preceding table, maximum allowable emissions of particulate matter for existing fuel burning equipment and new fuel burning equipment must be calculated using the following equations:*

For existing fuel burning equipment: $E = 0.882 * H^{-0.1664}$

For new fuel burning equipment: $E = 1.026 * H^{-0.233}$ "

And, ARM 17.8.310(2) states: *"When the process weight rate falls between two process weight rate values in the table, or exceeds 3,000 tons per hour, the maximum hourly allowable emissions of particulate matter* ***must be calculated using the following equations****:*

(a) Maximum hourly allowable emissions of particulate matter, for process weight rates up to 30 tons per hour, must be calculated using the following equation:

$E = 4.10 P^{0.67}$

(b) Maximum hourly allowable emissions of particulate matter, for process weight rates in excess of 30 tons per hour, must be calculated using the following equation:

$E = 55.0 P^{0.11} - 40$

Where E = rate of emission in pounds per hour and P = process weight rate in tons per hour."

Section III.A.7 refers to ARM 17.8.309 for calculating a numerical PM emission for fuel- burning equipment based on the actual heating value of a particular fuel. ARM 17.8.309 also states: "For the purposes of this rule, heat input will be calculated as the aggregate heat content of all fuels (using the upper limit of their range of heating value) whose products of combustion pass through the stack or chimney." The calculated value is compared to the numerical limit specified in the rule to confirm compliance with the limit. Likewise, Section III.A.8 refers to ARM 17.8.310, which provides an equation to calculate a numerical PM emission from other operations or activities based on the actual process rate of the emitting equipment. This value is compared to the numerical limit specified in the rule to confirm compliance with the limit. The Department is satisfied that emission limits calculated with the equations specified in ARM 17.8.309 and ARM 17.8.310, which are approved rules within the Montana SIP, are adequate to ensure compliance with the applicable PM limits Please see response to comment 4 for discussion of removal of Section III.G (EU6).

8. Allowing 30-60 minutes to reset after ESP trip.
PERMIT SECTION and/or TOPIC: Compliance demonstration III.H.19

COMMENT: The draft Title V Permit appears to allow the polluter to operate without adequate PM controls. Section III.H.19 allows 30 to 60 minutes, and perhaps even longer, to allow the source to reset an electrostatic precipitator ("ESP") trip. Presumably, this means the Corette power plant could be operated for 30-60 minutes, perhaps longer, with no PM controls in place. It is unclear why this requirement is necessary and further under what authority DEQ has to allow a source to avoid utilizing its air pollution control equipment in such circumstances. It would seem that an ESP trip would be a preventable occurrence that the DEQ should not accommodate. The fact that the draft Title V Permit allows the source to operate without PM controls further indicates that the monitoring set forth in the Title V Permit is insufficient. At a minimum, **the draft Title V Permit must ensure that opacity is continuously monitored**, even during ESP trips, to ensure compliance with relevant opacity limits. [WildEarth Guardians 6/15/2011, comment 4b]

DEPARTMENT RESPONSE: Section III.H.19 of the draft permit OP2953-06 stated: *"PPLM shall operate and maintain the opacity CEM to monitor compliance with the opacity limitation in Section III.H.2. The testing shall be performed in accordance with the Opacity CEMS Appendix F and the Operation Modification Plan – Revision 4 Appendix J of this permit. As an addendum to the Operation Modification Plan - Revision 4 Appendix J, PPLM shall be allowed 30 to 60 minutes to successfully reset an ESP trip. In the event that this procedure fails in the time allotted, then the appropriate corrective actions contained in the Operation Modification Plan – Revision 4 and Revision 5 update Appendix J need to be initiated (ARM 17.8.1213)."*

The Operation Modification Plan – Revision 4 incorporated a plan outlining PPLM's response to ESP malfunctions which necessitate the splitting of an ESP bank. These changes should increase the level of particulate compliance achieved by the Corette Plant. Correspondence between Montana Power Company (MPC) and the Montana Air Quality Bureau, dated April 28, 1994, discussed the interpretation of the action by MPC in response to ESP malfunctions (trips). The *"question concerning situations where a bank of the ESP trips, for short-term or transient reason, and the operator subsequently successfully resets it…"* was raised. MPC suggested that the Operation Modification Plan was originally written *"directed at preventing an ESP bank from being split or removed from service without dropping load. It was not intended to precipitate a load drop in the time it takes to reset the bank of the ESP. It is not at all practical or logical to drop load when a bank trips because the time it takes to reset the ESP bank is much quicker than that required for reducing the load. However, if the problem should persist and the operator cannot reset the bank in a reasonable amount of time (i.e. 30 to 60 minutes), then the load should be reduced to 150 GMW or a level that shows compliance with the opacity limits (whichever is lower) and held there until the bank is back in service or until particulate testing outlined in the OMP Rev. and the Consent Decree indicates further load drop is necessary."*

The Montana Air Quality Bureau responded on June 20, 1994: *"The Air Quality Bureau's determination on this matter is that the plant operator be allowed the 30-60 minutes to successfully reset the ESP trip. In the event that this procedure fails in the allotted 20-60 minute time frame, then the appropriate corrective action needs to be initiated as required by the OMP and Consent Decree."*

The Operation Modification Plan – Revision 4, Section 4.1.1 states: *"Plant opacity will be monitored and controlled to meet the regulatory criteria listed in Section 3.0."* Section 3.0 of the Operation Modification Plan – Revision 4 states: *"Using the data and evaluations presented in the previous section, the following criteria are proposed to meet the particulate matter standard. These criteria utilize the opacity monitor as the primary indicator of continuing compliance except as outlined in 3.4.*

3.1 *The six-minute opacity requirements will remain as specified in ARM 16.8.1404* (currently codified as ARM 17.8.304)*. The provisions contained in this section are needed to allow startup/shutdown and sootblowing activities consistent with normal practices acknowledged by the agency in the present rules as necessary for operation.*

3.2 *In order to keep particulate matter emissions below the standard specified in ARM 16.8.1402* (currently codified as ARM 17.8.309) *on a continuing basis, the plant will keep average 24-hour opacity levels at or below 17%, based on the relationship shown in Figure 1. The 24-hour average opacity will begin each day at midnight and will be calculated by averaging all individual hourly opacity averages measured during the period. Hourly opacity averages will be at or below 23% opacity. If any hourly average in any 24-hour period exceeds 17% opacity, corrective action will be initiated during the following hour and will continue until the hourly average opacity values are at or below 17%. Corrective actions may include several operating changes or load decreases as necessary to reduce opacity in a timely manner.*

3.3 *Hourly opacity averages occurring during plant malfunction or emergency conditions will continue to be handled as specified in ARM 16.8.*705 (currently codified as ARM 17.8.110)*.*

3.4 *During times when ESP malfunctions result in failure of all or portions of a bank, all OMP guidelines and standards will be maintained. Load will be lowered to 150 GMW and Reference Method testing, followed by load adjustment, will be utilized to insure compliance."*

The Department believes that continuous opacity monitoring through the CAM Plan provides adequate frequency to assure compliance with the opacity limits. In addition, with respect to concerns regarding the operation of the continuous opacity monitor, there are no provisions that allow the COM to stop operation during ESP malfunctions. Opacity limits as well as particulate limitations continue to apply at all times throughout, and PPLM adequately describes the process which it will undertake to maintain compliance with all limitations during these events both in the CAM plan and in the Operation Modification Plan. ARM 17.8.110 also continues to apply if the incident is defined as a malfunction. For clarification

purposes, as stated previously, the Operation Modification Plan has been updated and included in the permit is Revision 4 and the Revision 5 update. Note also due to the removal of EU6 (Section III.G) the section that referred to Section III.H of permit OP2953-06 is now Section III.G in the draft permit OP2953-07.

9. GHG Concerns
PERMIT SECTION and/or TOPIC: Condition III.A.15
COMMENT: The draft Title V Permit indicates that the greenhouse gas reporting requirements under 40 C.F.R. § 98 are "NOT an applicable requirements under Title V." It is unclear how the DEQ concluded that these requirements are not applicable under Title V. The permit either needs to be revised to ensure that these applicable requirements are fully incorporated and enforced, or explain why it believes the greenhouse gas reporting requirements are not applicable. [WildEarth Guardians 6/15/2011, comment 4]

DEPARTMENT RESPONSE: In the preamble to the final Mandatory Reporting of Greenhouse Gases Rule (74 FR 56260), EPA expressly stated that GHG reporting requirements are not applicable requirements with respect to Title V permitting: "As currently written, the definition of ''applicable requirement'' in 40 CFR 70.2 and 71.2 does not include a monitoring rule such as today's action, which is promulgated under CAA sections 114(a)(1) and 208 [42 USC §§ 7414(a)(1) and 7542]." The definition of "applicable requirement" in 40 CFR 70.2 is consistent in this respect with the definition of "applicable requirement" in ARM 17.8.1201(10) for Montana's Title V Program.

10. Request to have the permit circulated for public review once draft document is revised.
COMMENT: The revised draft permit should be circulated for public review. [Earthjustice (MEIC/Sierra Club) 6/15/2011, Comment VI]

DEPARTMENT RESPONSE: In accordance with the administrative rules of Montana, the Department issued a draft permit (ARM 17.8.1201(12)) and allowed adequate time and notice (procedures) for public comment (ARM 17.8.1232(1)). Because of substantive changes made by the Department to the CAM plan for PPLM Corette, #OP2953 will be issued in draft for a second time. The Department has responded to comments received on Permit #OP2953-06 and included a summary of the comments and the Department's responses in the TRD. Therefore, after the draft comment period for #OP2953-07, pursuant to the rules and process described therein, the Department will revise the draft permit, as appropriate, based on comments received, and will transmit it to the EPA (ARM 17.8.1226(5)) as well as submitting all comments and Department responses to the EPA so EPA can "fulfill the obligation under Section 505(b)(2) of the FCAA to determine if a citizen petition may be granted."

11. Compliance with SO_2 emissions limits demonstrated through CEMS data.
PERMIT SECTION and/or TOPIC: Conditions III.H.8 through H.10 and Compliance demonstration III.H25 & H.26
COMMENT: The draft permit fails to clearly identify SO_2 emissions limits applicable to the Corette boiler. The draft permit references applicable requirements contained in the "SO_2 SIP Appendix, Stipulation, Exhibit A, Section 3(A)(1)(a)," but **fails to repeat those requirements in the draft permit**. Likewise, the draft permit references monitoring requirements from the "SO_2 SIP Appendix I" to the draft permit, **but does not restate those monitoring requirements in the permit conditions**. **Appendix I of the draft permit is omitted** from the public review copy. One purpose of the title V program is to "enable the source, States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements." 57 Fed. Reg. 32,250, 32,251 (July 21, 1992). Incorporation by reference of SO_2 emissions limits and monitoring requirements that are neither included in, or appended to the permit undermines this purpose. Because of these omissions from the draft permit, **it is unclear whether the permit requires PPL to demonstrate compliance with SO_2 emissions limits with continuous emissions monitoring system (CEMS) data for the Corette boiler.** To the extent that Appendix I contemplates compliance demonstrations through any other method or data-set, **DEQ should revise the permit to**

ensure that compliance is additionally demonstrated through CEMS data. See 40 C.F.R. § 70.6(c)(1) (where previously established monitoring requirements are not sufficient to assure compliance with an emission limit, the permitting authority must supplement monitoring to assure such compliance). [Earthjustice (MEIC/Sierra Club), 6/15/2011]

DEPARTMENT RESPONSE: Section III.H.10 stated: *"PPLM shall not emit SO_2 from the J.E. Corette boiler in excess of the sum of all of the three-hour emission limitations pursuant to the SO_2 SIP Appendix, Stipulation, Exhibit A, Section 3(A)(1)(a)"*. Three Hour Emissions "means the amount of SO_2 emitted in each of the eight non-overlapping three hour periods in a Calendar Day, expressed in pounds and rounded to the nearest pound". (Section 2(A)(13) of the SO_2 SIP Appendix, Stipulation, Exhibit A). Section 3(A)(1)(a)(i) of the SO_2 SIP Appendix, Stipulation, Exhibit A states that *"the Three Hour emission Limitation for SO_2 from the main boiler stack is dependent upon, and varies in accordance with, the Three Hour Average Buoyancy Flux of the exhaust gas that is emitted from the main boiler stack."* Section 3.(A)(1)(a)(ii) states: *"Three Hour Emissions of SO_2 per three hours from the main boiler shall not exceed the value of the Three Hour Emission Limitation, as determined by the following equations:*

For $F_3 < 250.3$; $E_L = (4.882 * F_3) + 1202.4$
For $F_3 \geq 250.3$; $E_L = *8.763 * F_3) + 230.9$

Where:

F_3 = Three Hour Average Buoyancy Flux in m^4/sec^3; and
E_L = Three Hour Emission Limitation or SO_2 in pounds of SO_2 per three hours"

In addition, Section 4(A) of the SO_2 SIP Appendix, Stipulation, Exhibit A states: *" Compliance with the emission limitations contained in Section 3(A)(1)(a) for the main boiler stack shall be determined by using data from the CEMS required by Section 6(B)(1) and (2), and in accordance with the appropriate equation(s) in Section 2(A)(1), (3), (7), (9), and (13), except when CEMS data is not available as provided in Section (A)(3) and (13). Although the CEMS data is the method of demonstrating compliance on a continuous basis, the data from the testing required by Sections 5(A) or 6(C) and (D) shall also be used to demonstrate compliance"*. In order to ensure that requirements associated with the SIP are not inadvertently changed or omitted, the Department points to the exact SIP language. However, the Department has summarized some of the requirements found in the SIP above, and has added a web link to Appendix I of the permit, which also provided several mechanisms for any interested party to get a copy of the SIP. The web link information has also been added to the TRD.

In the process of reviewing the permit to respond to the comments, the Department determined that Section III.H.10 correctly specified the SO_2 limit as stated in the SO_2 SIP Appendix, Stipulation, Exhibit A, Section 3(A)(1)(a). Section III.H.8 was incorrect. The Department has deleted Section III.H.8. Note also due to the removal of EU6 (Section III.G) the section that referred to Section III.H of permit OP2953-06 is now Section III.G in the draft permit OP2953-07.

12. The Startup, Shutdown, and Malfunction Plan Must Be Included with Permit and Subject to Public Review.

PERMIT SECTION and/or TOPIC: Condition III.A.14

COMMENT: The draft permit requires PPL to submit "a copy of any startup, shutdown, and malfunction (SSM) plan required under 40 C.F.R. § 63.6(e)(3) within 30 days of the effective date of this operating permit." Neither ARM 17.8.342 nor 40 C.F.R. 63.6 provides authority for deferring submission and approval of an SSM plan until after a title V operating permit is issued. DEQ's failure to require submission of the SSM plan prior to issuing the title V permit is improper because it abrogates DEQ's duty to assure compliance with federal requirements to minimize hazardous air pollutant emissions. 40 C.F.R. § 70.6(a)(1) requires that each permit include "emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirement." The SSM plan will contain operational requirements and limitations that will establish applicable to hazardous air pollutant emission limits. Because DEQ relies on the SSM plans to assure compliance and to define permit terms, the plans must be provided in the title V permit application and be reviewed with the title V permit. In addition, the SSM plan must be made available for public review with the draft title V operating permit to allow the public to determine whether the plan is sufficient to

ensure compliance, or even to discern the permit terms. Because the SSM must be included in the permit application and the permit, it must be available for review during the title V public comment process….[Earthjustice, 6/15/2011, comment III and PPLM, 6/15/2011, comment 5]

DEPARTMENT RESPONSE: Section III.A.14 of draft OP2953-06 states, "Pursuant to ARM 17.8.342 and 40 CFR 63.6, PPLM shall submit to the Department a copy of any startup, shutdown, and malfunction (SSM) plan required under 40 CFR 63.6(e)(3) within 30 days of the effective date of this operating permit (if not previously submitted), within 30 days of the compliance date of any new National Emission Standard for Hazardous Air Pollutants (NESHAPs) or Maximum Achievable Control Technology (MACT) standard, and within 30 days of the revision of any such SSM plan, when applicable. The Department requests submittal of such plans in electronic form, when possible." Therefore, the Department is not "deferring submission of an SSM plan until after a title V operating permit is issued." Because many Title V sources were subject to MACT standards and the requirement to develop SSM plans when Part 63 was changed to require making such plans available upon request (the General Provisions of Part 63 were first updated to include this concept in May of 2003), that wording was included in all Title V Operating Permits issued by the Department to require submittal of those plans that had not been previously submitted or been required to be submitted. It was not intended to "defer," nor has it "deferred," those requirements. For facilities subject to Title V that subsequently also became subject to a MACT standard that required compliance with the SSM requirements, the SSM plan would be required to be submitted within 30 days of the compliance date of that particular MACT. Because the PPLM Corette facility is currently subject to 40 CFR 63, Subpart ZZZZ (compliance date of May 3, 2013), that would be the initial MACT triggering that requirement. Therefore, the MACT SSM plan for Subpart ZZZZ, under Section III.A.14, would be required to be submitted by June 2, 2013. As requested, and as required by 40 CFR 63.6(e)(3)(v), the Department will provide to MEIC and Earthjustice the SSM plan pursuant to 40 CFR 63, Subpart ZZZZ for the PPLM – Corette facility following its submittal. The Boiler MACT (40 CFR 63, Subpart DDDDD) and the Utility MACT (40 CFR 63, Subpart UUUUU) have subsequent compliance dates and the respective SSM plans would also be subject to this requirement.

With respect to SSM plans being "available for review during the Title V public comment process," implying that the SSM plans themselves would be open to public comment, 40 CFR Part 63 is very clear. 40 CFR 63.6(e)(3)(ix) states,

> "The title V permit for an affected source must require that the owner or operator develop a startup, shutdown, and malfunction plan which conforms to the provisions of this part, but may do so by citing to the relevant subpart or subparagraphs of paragraph (e) of this section. However, any revisions made to the startup, shutdown, and malfunction plan in accordance with the procedures established by this part shall not be deemed to constitute permit revisions under part 70 or part 71 of this chapter and the elements of the startup, shutdown, and malfunction plan shall not be considered an applicable requirement as defined in § 70.2 and § 71.2 of this chapter. Moreover, none of the procedures specified by the startup, shutdown, and malfunction plan for an affected source shall be deemed to fall within the permit shield provision in section 504(f) of the Act."

The petition cited by the commenters, "WE Energies Oak Creek Power Plant, Order Responding to Request that the Administrator Object to Issuance of a State Operating Permit, at 24-25" does not refer to SSM plans as required by 40 CFR Part 63, and the startup shutdown plans referenced have different associated issues with respect to determining applicability of or exemptions from conditions in the permit.

SSM plans required by 40 CFR Part 63 do not determine applicability or exemptions with respect to MACT standards; they provide procedures to follow in the event of startup, shutdown, or malfunction events. The comment states: "In addition, the SSM plan must be made available for public review with the draft title V operating permit to allow the public to determine whether the plan is sufficient to ensure compliance, or even to discern the permit terms." The permit terms (the MACT in this case) and the compliance requirements for that MACT do not change and are not in question, regardless of the contents of the SSM plan.

13. Confirm that operation of a baghouse will assure compliance with opacity limits applicable to Corette's Ash handling and coal handling systems.
PERMIT SECTION and/or TOPIC: Conditions III.B.3 and B.7
COMMENT: The draft permit requires use of a fabric filter baghouse to contain dust from the loading and unloading of the 2,000-ton, 1,500-ton, and 300-ton tanks to demonstrate compliance with the 40% opacity limit applicable to those sources. The **permit contains no parameters or restrictions on the design or operation of the baghouse**, **nor any justification for DEQ's apparent conclusion that the baghouse will adequately limit opacity emissions**. The only monitoring or reporting requirement related to the baghouse is the requirement to maintain "a log of the date and time when bag filters were not operated while the emissions unit was operating." **The title V operating permit must include monitoring to determine whether the baghouse is properly functioning and is sufficient to assure compliance with the 40% opacity limit applicable to these sources.** See, e.g., In re: Wisconsin Pub. Serv. Corp.'s J.P. Pulliam Power Plant, Order Responding to Request that the Administrator Object to Issuance of a State Operating Permit, at 12 (June 28, 2010), available at http://www.epa.gov/region7/air/title5/petitiondb/petitions/jp_pulliam_decision2009.pdf ("if the permittee or permitting authority has demonstrated that the applicable PM limits can be met through the use of a baghouse, compliance with the PM limits can be assured by assuring proper function of the baghouse through monitoring of the relevant parameters for the baghouse"). **At a minimum, DEQ must clearly document its rationale for selected monitoring requirements.** 40 C.F.R, § 70.7(a)(5); In re: Wisconsin Pub. Serv. Corp.'s J.P. Pulliam Power Plant, at 12. Here, **DEQ has failed to demonstrate that infrequent monitoring and operation of a baghouse will assure compliance with opacity limits applicable to Corette's ash handling system**. [Earthjustice (MEIC/Sierra Club), 6/15/2011]

DEPARTMENT RESPONSE: EPA's Compilation of Air Pollutant Emission Factors, known as AP-42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources 1.1.3.8 states: *"Fugitive emissions are defined as pollutants which escape from an industrial process due to leakage, materials handling, inadequate operational control, transfer, or storage. The fly ash handling operations in most modern utility and industrial combustion sources consist of pneumatic systems or enclosed and hooded systems which are vented through small fabric filters or other dust control devices. The fugitive PM emissions from these systems are therefore minimal."* Section 1.1.4.1 states: "*Collection efficiencies of fabric filters can be as high as 99.9 percent."* Therefore, proper operation of the baghouse will limit particulate emissions, which will limit particulate matter visually; thus, opacity will be controlled by the proper operation of the baghouse. Also, the emitting unit does not have a particulate matter limit associated, as was the case with the Wisconsin unit, and PPLM is demonstrating compliance with a 40% opacity requirement. Please see the discussion of the visual surveys that are also be required of this emitting unit contained in the response to comment 3.

14. Justify that burning pipeline quality natural gas in the auxiliary boiler is adequate compliance demonstration.
PERMIT SECTION and/or TOPIC: Compliance demonstration III.C.4
COMMENT: The draft permit fails to require monitoring of Corette's auxiliary boiler emissions sufficient "to assure compliance with the permit terms." 42 U.S.C. § 7661c(c); 40 C.F.R. 70.6(c)(1); ARM 17.8.1213(2). The draft permit contains the follow emissions limitations applicable to auxiliary boiler emissions:

> C.1. PPLM may not cause or authorize to be discharged into the atmosphere from the boiler, when in operation, visible emissions that exhibit an opacity of 20% or greater, unless specified elsewhere in this permit (ARM 17.8.304 and ARN 17.8.752).
> C.2. When the boiler is in operation, particulate matter emissions from the boiler shall not exceed 0.459 lb/MMbtu (ARM 17.8.752).
> C.3. PPLM shall not fire in the boiler liquid or solid fuel containing sulfur in excess of 50 grains of sulfur/100 cubic feet of gaseous fuel (ARM17.8.322).

The only method DEQ proposes for demonstrating compliance is a requirement that "PPLM shall burn pipeline quality natural gas in the auxiliary boiler while in operation to monitor compliance with the limits in Section III.C.1, III.C.2, and III.C.3 (ARM 17.8.1213)." Draft Permit, Condition C.4. It is unclear how the requirement to "burn pipeline quality natural gas" is sufficient to assure compliance with

limits for opacity, PM, and fuel use. DEQ must explain its apparent determination that this is an appropriate method for attaining and ascertaining compliance, 40 CFR§ 70.7(a)(5), and establish monitoring and reporting requirements that ensure that emissions limits are actually being met. [Earthjustice (MEIC/Sierra Club), 6/15/2011]

DEPARTMENT RESPONSE: The Department has corrected both Sections III.C.1 and C.2. The auxiliary boiler is an emitting unit that is a grandfathered unit because it was installed prior to 1968, and has never undergone a best available control technology analysis. In other words, the unit predated air quality permitting in the state of Montana, and therefore is only subject to generally applicable standards. Thus, the only authority for Section III.C.1 is ARM 17.8.304, and the authority for Section III.C.2 is ARM 17.8.309. Also, the Department has determined that it is ARM 17.8.309 that applies on an ongoing basis and that Section III.C.2 was a one-time calculation that should not have been placed in the permit because it reflected allowable emissions only under specific circumstances.

Pipeline quality natural gas is low emissions fuel with respect to SO_2 and particulate matter, compared to other fossil fuels or biomass. Because of that, in many cases, compliance with emissions standards can be ensured on a continuous basis by appropriate fuel use and operation. In fact, a significant number of federal air quality regulations allow the use of "gaseous or liquid fossil fuel" (including natural gas) to meet compliance demonstrations for a variety of conditions (opacity, SO_2, etc.). For example, in the Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971 (40 CFR 60, Subpart D), 40 CFR Part 60.45(1) states: *"For a fossil-fuel-fired steam generator that burns only gaseous or liquid fossil fuel (excluding residual oil) with potential SO_2 emissions rates of 26 ng/J (0.060 lb/MMBtu) or less and that does not use post-combustion technology to reduce emissions of SO_2 or PM, CEMS for measuring the opacity of emissions and SO_2 emissions are not required if the owner or operator monitors SO_2 emissions by fuel sampling and analysis or fuel receipts".* Because the process weight rule was promulgated with the intention of covering multiple fuel types, it provides a conservative emission limitation. With respect to particulate matter emissions on natural gas fired boilers, the emission factor provided by EPA in AP-42, Section 1.4-6 (July 1998), would be approximately 0.007 lb/MMBtu, far below the 0.459 lb/MMBtu calculated from the process weight rule. In addition, AP-42, Chapter 1.2 states: *"Because natural gas is a gaseous fuel, filterable PM emissions are typically low. Particulate matter from natural gas combustion has been estimated to be less than 1 micrometer in size and has filterable and condensable fractions. Particulate matter in natural gas combustion are usually larger molecular weight hydrocarbons that are not fully combusted. Increased PM emissions may result from poor air/fuel mixing or maintenance problems."*

With respect to the sulfur in fuel rule (ARM 17.8.322), EPA's criteria for pipeline quality natural gas from 40 CFR 72.2 are as follows: *"Pipeline natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and which is provided by a supplier through a pipeline. Pipeline natural gas contains 0.5 grains or less of total sulfur per 100 standard cubic feet. Additionally, pipeline natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 Btu per standard cubic foot."* By definition, "pipeline natural gas" meets the requirements of Section III.C.3 requiring that the auxiliary boilers not burn fuel containing sulfur in excess of 50 grains of sulfur/100 cubic feet of gaseous fuel.

Therefore, combustion of pipeline quality natural gas and the associated summary reporting of fuel receipts would ensure compliance with the opacity, process weight, and sulfur in fuel rule.

15. Changes/updates associated with Emitting Units.
PERMIT SECTION and/or TOPIC: TRD, Page 7, Section B. Emissions Units and Pollution Control Device Identification and OP, Page 2, Section II, Summary of Emissions Units Table [PPLM 6/15/2011]

COMMENT: The following changes have been made to the noted Emission Units' (EU) pollution control devices or practices and should be reflected in the table

a. EU3, Coal Handling System – add dust suppression chemicals (foam)

b. EU4, Coal Storage Piles – add Sealant (dead storage pile), water and dust suppressant application (active piles)
c. EU8, Plant Roads – Replace "Washed and cleaned" with "Dust suppressant, water application"

DEPARTMENT RESPONSE: The Department has made the requested changes to the Title V permit and the TRD.

16. Additional information regarding particulate compliance test.
PERMIT SECTION and/or TOPIC: Section F. Compliance Designation, second paragraph, p. 5
The commenter provided the following supplemental information in regard to the December 6, 2010 particulate compliance test[3]:

> "On December 6, 2010, the second semiannual particulate compliance test for 2010 was conducted. On December 13, 2010, preliminary results of the test indicated particulate emissions higher than the allowable level. Immediate action was taken by lowering the plant load to 150 MW gross, a level at which compliance with the particulate emission standard was demonstrated in July 2010. On December 14, a series of diagnostic particulate tests were performed which confirmed particulate emissions were within the allowable level at that load (150 MW gross). On December 16, 2010, final results from the December 6, 2010 test were received which did confirm particulate emission higher than the allowable level.
> Plant operations were limited to 125 MW gross from December 17, 2010 to January 10, 2011 due to coal mill repairs. On December 20, 2010, another particulate compliance test was conducted at 125 MW gross which showed particulate emissions within the allowable level. On January 12, 2011 a particulate compliance test was conducted at 150 MW gross. It also showed compliance with the particulate standard at this self-imposed load limitation. Another particulate compliance test was conducted at 155 MW gross on February 10, 2011. Those results indicated particulate emissions within the allowable level. As discussed with Steve Christian and Roger Godfrey of MDEQ on February 15, 2011, the effective load limit on the plant is now 155 MW gross. Corette will continue to operate with this limit until demonstration can be made to allow the plant to operate at a higher level and remain within its particulates limit." [PPLM 6/15/2011]

DEPARTMENT RESPONSE: The Department considers this violation now closed as discussed in response to comment 2 and the Department has included additional information in the TRD with regard to the facility's compliance designation.

17. Clarification of on-site storage of permit documents, records and log books.
PERMIT SECTION and/or TOPIC: Page i., and other locations throughout the permit. "A copy of this permit must be kept on site at the above-named facility."
COMMENT: Confirm that an electronic copy of the permit accessed at the site meets this requirement. Confirm that it is acceptable for the copies of the permit, monitoring data, logs, and records required to be kept on site to be in electronic format. [PPLM, 6/15/2011, comment 1]

DEPARTMENT RESPONSE: The commenter is requesting confirmation that electronic copies of permits, logs, reports, etc. are adequate for meeting the requirement of maintaining copies of the documents at the site. ARM 17.8.1212 (2) states *"Each air quality operating permit shall incorporate all applicable recordkeeping requirements and require, where applicable, the following:… (b) Retention of records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report, or application… All monitoring data, support information, and required reports and summaries may be maintained in a computerized form at the plant site if the information is made available to department personnel upon request, which may be for either hard copies or computerized format. Strip-charts must be retained in their original form at the plant site and shall be made available to department personnel upon request."* In addition, ARM 17.8.1513(4) – Reporting and Recordkeeping Requirements states that *"Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or*

[3] Summarized from a letter to the Department (Roger Godfrey) from PPLM's Tom Olson dated March 11, 2011.

microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements." The Department agrees that maintaining electronic copies of facility documents such as permits, logs, and/or records at the site is adequate.

18. Change address.
PERMIT SECTION and/or TOPIC: Page 1, PPL Montana, LLC address
COMMENT: The mailing address for PPLM corporate headquarters is 303 N Broadway, Suite 400, Billings, MT 59101 [PPLM 6/15/2011]

DEPARTMENT RESPONSE: The Department has made the requested change to the Title V permit.

19. Responsible Officer phone number
PERMIT SECTION and/or TOPIC: Page 1, Responsible Official Phone Number
COMMENT: The direct-dial phone number is 406-237-6932 **[PPLM 6/15/2011]**

DEPARTMENT RESPONSE: The Department has made the requested change to the Title V permit.

20. When is SSM Plan due?
PERMIT SECTION and/or TOPIC: Condition III.A.14
COMMENT: Provide clarification on when a new SSM plan is due. Recently promulgated applicable NESHAPS have compliance dates in 2013. Therefore, we would not anticipate having a SSM plan until that date. However the language in this requirement may suggest that a SSM plan would possibly be required earlier than that, or thirty days after this permit becomes final. **[PPLM 6/15/2011]**

DEPARTMENT RESPONSE: See response to comment #11 above. The wording from the Department's Section III.A.14 of the operating *permit template* reads*: "Pursuant to ARM 17.8.342 and 40 CFR 63.6, PPLM shall submit to the Department a copy of any startup, shutdown, and malfunction (SSM) plan required under 40 CFR 63.6(e)(3) within 30 days of the effective date of this operating permit (if not previously submitted),* ***within 30 days of the compliance date of any new National Emission Standard for Hazardous Air Pollutants (NESHAPs) or Maximum Achievable Control Technology (MACT) standard****…"* Therefore the Department agrees that the SSM plan must be submitted within 30 days of the compliance date in accordance with the applicable MACT (40 CFR 63, Subpart ZZZZ). The compliance date of 40 CFR 63, Subpart ZZZZ is May 3, 2013; therefore, the SSM plan would need to be submitted by June 2, 2013 for that MACT standard.

21. Visual survey frequency rationale.
PERMIT SECTION and/or TOPIC: Condition III.B.4, D.5, E.3, I.3, and L.3.
COMMENT: Request background leading to the modification of the compliance demonstration requirement (from bi-monthly to weekly). [PPLM, 6/15/2011, comment 6]

DEPARTMENT RESPONSE: The commenter requests the background leading to the increased frequency of the visual inspection compliance demonstration. In addition, the commenter noted that the summary tables for the applicable Emitting Units (EU), as well as the Technical Review Document, still contain references to bi-monthly visual inspections. The Department understands that it is not feasible to monitor fugitive emissions from the ash and coal handling systems, coal storage piles, plant roads, and sorbent handling system continuously, and the frequency of significant emissions from these sources is very low. However, part of the intent behind requiring visual surveys on emitting units is encouraging facilities to become more aware of day-to-day operation and fluctuations within their processes and how those operations affect visible emissions, which generally results in more proactive operation and less visible emissions overall. The weekly frequency of visual surveys has developed over the history of Montana's implementation of the Title V permit program and the Department believes it is consistent with requirements on other sources in Montana as well as throughout the Region. The increased frequency of the visual surveys will provide a more accurate representation of the opacity at these emitting units. The Department agrees that the draft permit OP2953-06 included typographical errors in the referenced EU summary tables and has corrected them.

22. Change term from annubar to flow monitor.
PERMIT SECTION and/or TOPIC: Condition III.H.26
COMMENT: Request term annubar in second to last sentence be changed to "flow monitor".). [PPLM, 6/15/2011, OP comment 7]

DEPARTMENT RESPONSE: The Department has made the requested change to the Title V permit.

23. Clarify meaning of phrase
PERMIT SECTION and/or TOPIC: Page 18, Condition H.27
COMMENT: Clarify the meaning of the phrase "available in full upon request by the Department *or the facility*." **[PPLM, 6/15/2011, OP comment 8]**

DEPARTMENT RESPONSE: The Department has removed the phrase referred to in the comment. PPLM submitted an updated version of the CAM plan at the request of the Department, and the Department has not only updated the CAM plan in the permit, but has also placed all additional information provided by PPLM in this document.

24. Removal of Mercury monitoring requirements
PERMIT SECTION and/or TOPIC: Condition III.H.29 and H.30
COMMENT: EPA, in a March 28 rulemaking (76FR17288), removed the mercury monitoring requirements from 40CFRPart 75. When these deletions are officially adopted by Montana, the references in this permit will be referring to obsolete or non-existent requirements. This comment is also applicable to Appendix L Mercury Emissions Monitoring System (MEMS). In addition, PPLM requests that the deletion of the bias test and data substitution requirements for mercury monitoring be specified in this permit. [PPLM, 6/15/2011, OP comment 9]

DEPARTMENT RESPONSE: As PPLM is aware, the references to 40 CFR Part 75 were included in the MAQP for the facility pursuant to the mercury monitoring requirements under ARM 17.8.771. Attachment 2 in the MAQP would need to be updated prior to any changes being made to the Mercury Emission Monitoring Systems (MEMS) Appendix in the Title V permit because the MAQP attachment is the underlying requirement/authority for the same attachment being in the Title V permit appendix. The bias test requirement can be removed upon request for an administrative amendment (AA) to the MAQP as described in the Department's letter to PPLM from Roger Godfrey dated October 21, 2010. Similar discussions (as well as an AA request) would need to take place to establish appropriate data substitution requirements.

25. Update NOx Compliance Plan
PERMIT SECTION and/or TOPIC: Appendix H, Acid Rain, NOx Compliance Plan Update
COMMENT: Enclosed with this submittal is an updated NOx compliance plan for the JE Corette Plant.

DEPARTMENT RESPONSE**:** The Department has updated the NOx compliance plan in Appendix H of the Title V permit with the material submitted.

26. Change personnel addresses.
PERMIT SECTION and/or TOPIC: Appendices I, J, and K
COMMENT: The address for Steve Christian, Technical Contact Person, is now C/O "Environmental Compliance Department" instead of "Environmental Engineering Department". The rest of this contact information is correct.

DEPARTMENT RESPONSE: The Department has made the requested change to the Title V permit.

SECTION VII. DRAFT PERMIT #OP2953-07
SUMMARIZED COMMENTS AND DEPARTMENT RESPONSES

The Department provided a comment period for Draft Operating Permit #OP2953-07 that began on August 10 and ended on September 24, 2012. The following comments were received by the Department during the public comment period. Minor changes have been incorporated in the Proposed Operating Permit #OP2953-07 resulting from the comments received.

1. "DEQ has failed to ensure compliance with the one-hour ambient standards for SO_2 as necessary to protect public health."

COMMENT:
DEQ has failed to assure compliance with health-based standards for short-term exposures to SO2.

The SIP process is not sufficient to satisfy DEQ's constitutional obligations with respect to Corette's SO2 emissions because information available now demonstrates that Corette is the overwhelming source of SO2 pollution in Yellowstone County, and an hourly SO2 limit of 154.7 lbs/hour or 0.08 lb/MMBtu is essential to ensure protection for the health of people downwind of the facility from the significant health impacts attributable to short-term exposure to higher SO2 levels.

DEQ's draft Title V permit for Corette improperly authorizes emissions that would violate the 1-hour SO2 NAAQS by a very large margin and, consequently, violate DEQ's mandate to "maintain and improve a clean and healthful environment in Montana for present and future generations." Mont. Const., art. IX, §1.
[Earthjustice (MEIC/Sierra Club) 9/24/2012]

DEPARTMENT RESPONSE: Draft permit #OP2953-07 applies the current applicable requirements and associated sulfur dioxide (SO_2) conditions, compliance demonstrations, recordkeeping, and reporting requirements. These requirements apply to EU7 - J.E. Corette Boiler contained in Section III.G of the proposed permit. The commenter stated that the Department failed to apply a new 1-hr SO_2 limitation in relation to the new 1-hr SO_2 National Ambient Air Quality Standards.

On August 23, 2010, EPA's new 1-hour SO_2 NAAQS of 75 parts per billion (ppb), which is attained when the 3-year average of the annual 99th-percentile of 1-hour daily maximum concentrations does not exceed 75 ppb at each monitor within an area, became effective. EPA revised the primary SO_2 NAAQS to provide the requisite protection of public health. As defined by Administrative Rules of Montana (ARM) 17.8.201(2), "'Ambient air quality standards' means a permissible level of an air contaminant in the ambient air as defined by the maximum frequency with which a specified level may be exceeded or by a maximum level of an air contaminant in or on body or plant tissues."

As stated in the *EPA White Paper for Streamlined Development of Part 70 Permit Applications (July 10, 1995),* "In general, this program [Title V Operating Permit Program] was not intended by Congress to be the source of new substantive requirements. Rather, operating permits required by title V are meant to accomplish the largely procedural task of identifying and recording existing substantive requirements applicable to regulated sources and to assure compliance with these existing requirements. Accordingly, operating permits and their accompanying applications should be vehicles for defining existing compliance obligations rather than for imposing new requirements or accomplishing other objectives."

The Department agrees with EPA's statement in its August 23, 2010, *Guidance Concerning the Implementation of the 1-hour SO_2 NAAQS for the Prevention of Significant Deterioration Program,* in which EPA stated: "EPA interprets the Prevention of Significant Deterioration (PSD) provisions of the Clean Air Act and EPA regulations to require that any federal permit issued under 40 CFR 52.21 on or after [August 23, 2010] must contain a demonstration of source compliance with the new 1-hour SO_2 NAAQS." In addition, the Department agrees that the PSD provisions in the Montana rules require that any State of Montana air quality permit issued under ARM Title 17, chapter 8, subchapter 8 on or after [August 23, 2010] must contain a demonstration of source compliance with the new 1-hr SO_2 NAAQS.

To the knowledge of the Department, PPLM has not undertaken any modifications that triggered review under ARM Title 17, chapter 8, subchapter 8 since the effective date of August 23, 2010; and therefore, PPLM has not triggered a review of the new 1-hour SO_2 NAAQS.

The commenter also makes the statement that *"The SIP process is not sufficient to satisfy DEQ's constitutional obligations …"* The Department strongly disagrees with this statement and believes that the authority to implement the new 1-hr SO_2 NAAQS is based in both the SIP process and any modifications that would trigger a review and analysis of the 1-hr SO_2 NAAQS. When any NAAQS is revised (such as the SO_2 NAAQS), EPA is required to promulgate the ambient air quality designation status for all states. EPA promulgated the one-hour SO_2 NAAQS in June 2010. 42 USC 7407(1)(B) of the FCAA provides that the period for making these demonstrations may be extended for up to one year in the event EPA has insufficient information to promulgate the designations. To date, EPA has not promulgated designations. In the absence of EPA promulgation of the designations, the Department is not required to propose a modification to the SIP for the 1-hr SO_2 NAAQS. When EPA acts, states will then address applicable rules and SIP modifications pertinent to the revised NAAQS and designations.

Section 75-2-102, MCA, of the Clean Air Act of Montana states that the Legislature was mindful of the right to a clean and healthful environment in Mont. Const. Art. II, § 3, and the state's duty to maintain a clean and healthful environment in Mont. Const. Art. IX, § 1, when it passed the Clean Air Act of Montana. That act, the Legislature stated, provides adequate remedies for protection of the environmental life support system and natural resources.

In *Mont. Envtl. Info. Ctr v. Mont. Dep't Envtl. Quality,* 2002 ML 3836; 2002 Mont. Dist. LEXIS 1864, the Montana First Judicial District Court for Lewis and Clark County held that a plaintiff, to properly allege that an action by a state agency is unlawful, must allege either that the challenged act was undertaken in violation of the applicable law or rule, or that the law (or its implementing rules) was unconstitutional on its face or as applied. The court noted that "[t]he party challenging the constitutionality of a statute bears the burden of proving the statute unconstitutional beyond a reasonable doubt."

Because the plaintiff had not alleged that the state agency had violated a law or rule, and had not alleged that a law or rule was unconstitutional, its claim of unconstitutionality was dismissed.

Here, the commenter does not point to a specific law or rule that is allegedly being violated or is unconstitutional because it violates the right to a clean and healthful environment.

As discussed above, if required after EPA makes its designation, DEQ will propose modifications to the SIP and any necessary rules. However, until EPA makes a designation, DEQ is under no requirement to act, and any action would be premature.

2. "The revised draft Title V permit fails to include all applicable requirements. The Corette Title V permit must include specific provisions to assure compliance with Montana's Regional Haze FIP."

COMMENT:
The draft operating permit fails to assure compliance with all applicable requirements because it does not include emission limits and related requirements established by Montana's Regional Haze FIP. EPA signed a final rule promulgating Montana's Regional Haze FIP on August 15, 2012 and published it in the Federal Register on September 18, 2012. See 77 Fed. Reg. 57,864 (Sep. 18, 2012). EPA adopted the FIP pursuant to its authority under section 110(c) of the federal Clean Air Act, 42 U.S.C. § 7410(c), to satisfy the Act's requirement to address visibility impairment at federal Class I areas. Thus, FIP conditions are applicable requirements pursuant to ARM 17.8.1201(10)(b).

The Montana Regional Haze FIP established new emission limits for Corette, specifically: 0.26 lbs/MMBtu of PM; 0.57 lbs/MMBtu of SO2, and 0.35 lbs/MMBtu of NOx. 40 C.F.R. § 52.1396(c). Compliance with PM limits must be achieved by November 15, 2012, and compliance with SO2 and NOx limits is required within 180 days of the rule's October 16, 2012 effective date, i.e. April 14, 2013. Id. §

52.1396(d). Although these regional haze requirements have future-effective compliance dates, they will apply to Corette within the 5-year duration of Corette's Title V permit and therefore must be incorporated, along with all monitoring, record-keeping, and reporting requirements outlined in the FIP. See ARM 17.8.1201(10); see also 40 C.F.R. § 70.2.
[Earthjustice (MEIC/Sierra Club) 9/24/2012]

DEPARTMENT RESPONSE: The Department certainly acknowledges the applicability of the future limitations set forth for PPLM as a result of Montana's Regional Haze FIP.

The limitation listed as Best Available Retrofit Technology (BART) for PM is 0.26 lb/MMBtu with a compliance timeframe of 30 days after the effective date of the FIP. The final rule is effective October 18, 2012 (77 FR 57864, Sep. 18, 2012). Compliance with the PM limitations must be achieved by November 17, 2012 rather than the November 15, 2012 date indicated by the commenter. In the latest particulate emission test, PPLM's actual PM emissions were 0.167 lb/MMBtu. No changes to the Operating Permit appear to be necessary.

As the commenter has reiterated, compliance with the SO_2 and NOx limitations set forth within the Montana's Regional Haze FIP must be achieved within 180 days after the effective date of the Montana's Regional Haze FIP where installation of additional controls is not necessary to comply with the BART limit; otherwise the compliance deadline is five years after the effective date of the FIP. EPA has indicated that no additional controls will be necessary at PPLM to meet an SO_2 limit of 0.57 lbs/MMBtu and a NOx limit of 0.35 lbs/MMBtu, thus the compliance date will be within 180 days after the effective date.

The commenter is reminded that the effective date of the rule is October 18, 2012. As stated in ARM 17.8.1228, "Additional applicable requirements under the FCAA become applicable to a major source holding a permit with a remaining term of three or more years. Reopening and revision of the permit shall be completed not later than 18 months after promulgation of the applicable requirement." Although the requirements contained within Montana's Regional Haze FIP are applicable requirements, the Department has 18 months after promulgation to complete a reopening of the permit. Inserting limitations required under Montana's Regional Haze FIP within the Title V operating permit is unnecessary at this time.

The Department has included a statement within Section V of the TRD of this proposed permit for OP2953-07 listing applicability of the Regional Haze FIP requirements as a future consideration.

3. "The revised draft Title V permit fails to include all applicable requirements. The Corette Title V permit must include specific provisions to assure compliance with Hazardous Air Pollutant Standards."

COMMENT:
The draft operating permit likewise fails to assure compliance with 40 C.F.R. 63, Subpart UUUUU – National Emission Standards for Hazardous Air Pollutants ("NESHAPs") from Coal- and Oil-Fired Electric Generating Units. DEQ acknowledges that the NESHAPs are an applicable requirement, as the technical review document identifies "Maximum Achievable Control Technology (MACT)" pursuant to 40 C.F.R. 63, Subpart UUUUU, as an "applicable air quality program." TRD0513-08, p.1. However, DEQ has failed to specifically identify MACT emission limits in the draft permit.
The NESHAPs have already been promulgated, with an effective date of April 16, 2012. 77 Fed. Reg. 9,304 (Feb. 16, 2012). Pursuant to these standards, the Colstrip units must comply with limits on the emissions of hazardous air pollutants such as mercury, acid gases (or SO2 as a surrogate), and metallic hazardous air pollutants (or particulate matter as a surrogate) by April 16, 2015. 40 C.F.R. §§ 63.9984, 63.9991. This compliance deadline falls within the five-year period that would be covered by any final operating permit issued here. As such, the NESHAPs qualify as an "applicable requirement," ARM 17.8.1201(10), and the draft permit must be revised to specifically require that each of the Corette generating units come into compliance with the NESHAPs by April 15, 2015.

In addition, the Draft Permit must be revised to include provisions needed to make the requirement to comply with the NESHAPs enforceable. For example, utilities have choices under the NESHAPs as to whether to satisfy limits for specific hazardous air pollutants or for other pollutants that are purportedly surrogates for those hazardous air pollutants. By identifying in the permit the specific emission limits and standards that Corette will need to satisfy to comply with the NESHAPs, the Title V permit would "clarify and make more readily enforceable a source's pollution control requirements," including making clear how general regulatory provisions apply to specific sources. S. Rep. 101-228, 1990 USCAAN 3385, 3730 (Dec. 20, 1989). Without such provisions, the permit would unlawfully fail to "assure compliance" with all applicable requirements. 42 U.S.C. § 7661c(a),(c); 40 C.F.R. § 70.6(c)(1).

Updated particulate matter ("PM") controls will be necessary at Corette to meet EPA's PM limit for non-mercury metal hazardous air pollutants. Specifically, EPA has adopted a filterable PM limit of 0.03 lb/MMBtu as a surrogate for non-mercury metal hazardous air pollutants. Further, the NESHAPs establish an acid gas limit for HCl of 0.002 lb/MMBtu or, alternatively, utilities can elect to comply with a surrogate limit on SO2 of 0.20 lb/MMBtu. DEQ must revise the draft operating permit to incorporate specific NESHAPs emission limits and associated monitoring, record-keeping, and reporting requirements.
[Earthjustice (MEIC/Sierra Club) 9/24/2012]

DEPARTMENT RESPONSE: The Department acknowledges the applicability of the future limitations set forth for PPLM as a result of 40 CFR 63, Subpart UUUUU – National Emission Standards for Hazardous Air Pollutants ("NESHAPs") for Coal and Oil-Fired Electric Generating Units, which was published as final in the Federal Register on February 16, 2012, with an effective date of April 16, 2012. The Department is assuming the commenter intended to reference the TRD2953-07 in which the Department acknowledges the applicability of this regulation.

As required under 40 CFR 63, Subpart UUUUU, an existing EGU (i.e. PPLM Corette) must comply with the subpart no later than April 16, 2015, unless an extension is granted per 40 CFR 63.6(i). As stated in ARM 17.8.1228, "Additional applicable requirements under the FCAA become applicable to a major source holding a permit with a remaining term of three or more years. Reopening and revision of the permit shall be completed not later than 18 months after promulgation of the applicable requirement.". Although the requirements contained within 40 CFR 63, Subpart UUUUU are applicable requirements, PPLM has up to 18 months following promulgation to have the permit reopened and revised. In addition, and as mentioned by the commenter, because of the multiple compliance options available with respect to different pollutants (for example, compliance with standards for acid gas hazardous air pollutants can be met using a hydrochloric acid or SO_2 emission limit), adding specific limits at this time would be premature. Therefore, inserting limitations required under 40 CFR 63, Subpart UUUUU within the Title V operating permit is unnecessary at this time.

4. "**The permit must clarify applicable SO_2 emissions limits and monitoring requirements."**

COMMENT:
The draft permit still fails to clearly identify SO2 emissions limits that "enable the source, States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements." 57 Fed. Reg. 32,250, 32,251 (July 21, 1992). As observed in MEIC and Sierra Club's June 11, 2012 comments, the draft permit references applicable SO2 limits contained in the "SO2 SIP Appendix, Stipulation, Exhibit A, Section 3(A)(1)(a)," but fails to identify those requirements in the draft permit. Likewise, the draft permit references monitoring requirements from the "SO2 SIP Appendix I" to the draft permit, but does not restate those monitoring requirements in the permit conditions. See Draft Permit, Conditions G.23 & G.24. Compounding the lack of clarity in the permit, the referenced SO2 SIP is not even attached to the permit in the referenced appendix, but instead, is retrievable from an EPA website (if the user can successfully navigate the website to locate the appropriate document among the dozens listed).

Furthermore, even the referenced SIP does not clearly identify the appropriate SO2 emission limit, which is expressed as an equation that depends upon the "buoyancy flux" of the boiler exhaust gas. Because the public (or even the regulator) has no means of identifying the buoyancy flux of Corette's boiler exhaust, this limit cannot possibly "enable the … States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements." 57 Fed. Reg. at 32,251.

At a minimum, DEQ should revise Corette's SO2 limit as reflected in the Title V permit to specifically include the equation identified in the SIP, as well as the numeric range represented by that equation. Corette's buoyancy flux may not drop below 144.6 m4/sec3 or exceed 448.57 m4/sec3. Therefore, the range of allowable three-hour SO2 emissions is 1,908.3 to 4,161.7 lbs. This range should be clearly reflected in the permit.
[Earthjustice (MEIC/Sierra Club) 9/24/2012]

DEPARTMENT RESPONSE: The Department has identified the applicable requirements and has included the SIP as part of Appendix I of the permit. The Department had provided a link to the SIP documents as well as contact information for any interested party, if needed, to contact the Department for a complete copy of the SIP if an interested party does not have web access. Based on the comment received, the Department attempted to include the SIP in the permit, but the permit becomes unmanageable in size when the SIP is included in its entirety, and re-writing the entire SIP into the permit could cause potential errors. The Department has therefore maintained the web link as well as contact information in Appendix I and has also provided step-by-step instructions to find the different applicable SIP documents via the web link.

The Department has included the buoyancy flux minimum and maximum in the permit, as stated in the SIP. The other equations for calculation of the three hour SO_2 limit can be found by following the steps indicated in Appendix I of the proposed permit. The SIP contains detailed emission equations for calculating the SO_2 emissions. PPLM submits this information to the Department in accordance with the SIP on a quarterly basis. The information is reviewed by the Department and is a public record that is available for review by any interested party. The development of the SIP and the means by which PPLM is obligated to demonstrate compliance went through a public comment process and was finalized as presented in the SIP. PPLM operates continuous emissions monitors (CEMS) and is required to maintain the accuracy of these monitors. The information may be reviewed on a quarterly basis, but data is collected on an ongoing basis.

5. "The revised draft Title V permit fails to include monitoring necessary to ensure compliance with all applicable requirements. The Corette Title V permit fails to require sufficient PM Monitoring."

COMMENT:
The draft operating permit fails to require monitoring of particulate matter (PM) sufficient to "assure compliance with the permit terms". 42 U.S.C. § 7661c(c); ARM 17.8.1213(2). The draft permit would require PM-emissions monitoring through Method 5 or Method 5b -a semi-annual stack test for filterable PM. See Draft Permit, condition G.18. This monitoring is inadequate.

The Draft Permit must be revised to require the use of PM Continuous Emissions Monitors (CEMs) for monitoring compliance at each unit so that DEQ satisfies its duty to "set forth inspection, entry, monitoring, compliance certification, and reporting requirements to assure compliance with the permit terms and conditions." 42 U.S.C. § 7661c(a),(c); see also 40 C.F.R. § 70.6(c)(1); ARM 17.8.1212. Furthermore, even if continuous particulate monitoring were not necessary (and it is), more than three hours of the 8,760 hours in a year must be monitored to ensure compliance with Corette's PM limits.
[Earthjustice (MEIC/Sierra Club) 9/24/2012]

DEPARTMENT RESPONSE: The commenter mentions the necessity of requiring continuous PM monitoring for all 8,760 hours in the year. ARM 17.8.1213 states: "all permits shall contain compliance certification, testing, monitoring, reporting, and recordkeeping requirements **sufficient to assure compliance** with the terms and conditions of the permit ." (emphasis added)." The proposed Title V permit contains two approaches to assure compliance with the PM limit: semi-annual performance testing (Method 5 or 5b and Method 202) and a CAM plan. See EPA's Order Responding to Petitioner's Request that the Administrator Object to Issuance of a State Operating Permit (Petition Number: VIII-2009-01)[4]. In that Order, EPA indicated that "A title V permit must include all applicable requirements. *See* 40 CFR 70.5(c)(4). It must also include monitoring necessary to assure compliance with applicable requirements. *See* CAA §§ 504(a); *see also* 40 CFR 70.6(c)(I). Petitioner fails to identify any applicable requirement that requires the use of PM CEMS for monitoring compliance with the PM limit. Petitioner also has not alleged or demonstrated that PM CEMS are the only monitoring that can assure compliance with the PM limit and therefore must be included in the title V permit." EPA further stated that "Petitioner fails to demonstrate that PM CEMS is required as an applicable requirement or as monitoring necessary to assure compliance with an applicable requirement. Therefore, I deny the petition on the issue that the Hayden Power Station title V permit must include PM CEMS to assure compliance with the boilers' PM limit." The Department concurs and finds this language applicable in response to the comment.

CEMS are not required by any EPA or State regulation currently applicable to the source and the commenter fails to demonstrate that additional monitoring, including CEMS, is necessary to ensure compliance with the emissions limits of the Permit. The Department believes that the semiannual compliance monitoring of PM, in addition to continuous opacity monitoring, and the CAM plan performance indicators, provide adequate frequency to ensure compliance with the PM limits. Corette has demonstrated through the years of test data and opacity data that there is a correlation between the opacity and the particulate emissions from the facility. While this is not the only measure or determination of compliance with the particulate emissions limit, opacity can be used as one of the indicators of particulate emissions at the facility. Continuous opacity data is a factor and an indicator required by the CAM plan to be monitored.

The Department has also already acknowledged the applicability of the future limitations set forth for PPLM as a result of 40 CFR 63, Subpart UUUUU – NESHAPs for Coal and Oil-Fired Electric Generating Units, which was published as final in the Federal Register on February 16, 2012, with an effective date of April 16, 2012. Subpart UUUUU will be applicable to Corette, but even this new regulation does not require, in every instance, the use of a PM CEMS to demonstrate compliance with the future particulate limitation, but rather provides options for the source to choose from in its compliance demonstration. EPA states in the preamble to the final rule: "EPA anticipates that the PM monitoring device that may most often be used is a PM continuous parameter monitoring system … ." [not a PM CEMS]. The Department has not changed the frequency or types of testing required, but PPLM will revisit this requirement when required to comply with Subpart UUUUU. The Department has 18 months after promulgation to complete a reopening of the permit thus the Department will review it as part of updating the Title V.

6. "The revised draft Title V permit fails to include monitoring necessary to ensure compliance with all applicable requirements. The Colstrip Title V permit fails to incorporate necessary provisions for mercury monitoring, including the facility's MEMS Plan."

COMMENT:
The draft operating permit fails to include necessary assurances for compliance with mercury emissions limits. See 42 U.S.C. § 7661c(a); see also ARM 17.8.771 (establishing mercury emission standards for Montana). The draft permit identifies Mercury Emission Monitoring Systems ("MEMS") as the method for demonstrating compliance with facility-wide mercury emission limits of 0.9 lb/TBtu, calculated as a rolling 12-month average. See Draft Permit, Condition G. 27. However, the MEMS plan incorporated into the permit. Because the MEMS is the means by which Corette must assure compliance with mercury limits, the MEMS must be included in the Title V permit.
[Earthjustice (MEIC/Sierra Club) 9/24/2012]

[4] In the matter of Public Service Company of Colorado, dba Xcel Energy, Hayden Station, Permit Number: 96OPRO132, Issued by the Colorado Department of Public Health and Environment, Air Pollution Control Division.

DEPARTMENT RESPONSE: The Department can provide to MEIC and Earthjustice the MEMS plan under separate cover and is open to discussion if the commenters have additional comments or questions regarding the MEMS plan. However, the Department does not agree that it needs to be attached to the permit (and "included in the permit application and final permit"). The mercury emission and monitoring requirements are applicable requirements pursuant to ARM 17.8.771 (a "State-Only" requirement), which invokes 40 CFR Part 75 with respect to MEMS. The requirement to submit a MEMS plan was originally required in MAQP #2953-00 in Attachment 2, which is also contained in #OP2953-08, Appendix L. MAQP #2953-00 and Attachment 2 were issued after a public comment period . 40 CFR Part 75 was included in ARM 17.8.771 to be consistent with the Federal Clean Air Mercury Rule (CAMR), now vacated. During Montana's mercury rulemaking process, numerous stakeholders stressed the need to keep the monitoring provisions consistent with those being required on a national level. However, a significant part of the CAMR provisions were dedicated to a mercury market trading system and monitoring provisions associated with that, similar to the Acid Rain trading provisions. For the purposes of determining allowances and compliance with allowances, there are additional monitoring provisions required in 40 CFR Part 75 that are not relevant to compliance with the emission limitations required under ARM 17.8.771. Because of those additional complexities (and the overall complexity of MEMS beyond traditional NO_x and SO_2, emissions monitors, etc.) and to clarify for the public and affected facilities the specific monitoring requirements, Department permitting and compliance staff worked with the affected industry operating a mercury-emitting generating units on the requirements housed in Attachment 2 of the applicable source's permit. The MEMS plans required under Attachment 2 are specific to the type of monitors being used and describe how 40 CFR Part 75 is being met with those monitors, as do similar plans for COMS, SO_2 CEMS, etc. Such plans do not "determine applicability of or exemptions from conditions in the permit" as described in the petition cited by the commenters, "WE Energies Oak Creek Power Plant, Order Responding to Request that the Administrator Object to Issuance of a State Operating Permit, at 24-25."

As stated in the *EPA White Paper for Streamlined Development of Part 70 Permit Applications* (July 10, 1995), **"**This paper provides guidance to States and sources in devising a means to revise NSR permit terms as appropriate(including classification as a State-only enforceable term) in conjunction with the part 70 permit issuance process. As used here, 'new source review' refers to all forms of preconstruction permitting under programs approved into the SIP, including minor and major NSR ... The EPA recognizes that NSR permits contain terms that are obsolete, extraneous, environmentally insignificant, or otherwise not required as part of the SIP or a federally-enforceable NSR program. Such terms, as subsequently explained, need not be incorporated into the part 70 permit to fulfill the purposes of the NSR and title V programs required under the Act." In conclusion, the Department's mercury requirements are not a part of the SIP and the Department has corrected the permit to reflect the fact that the mercury conditions and associated requirements are "State-Only" requirements.

In addition, to include/attach such plans to Title V permits would require a modification or amendment to the Title V permit when any part of the MEMS plan was altered. As previously stated, the plans will be available upon request but do not need to be attached to the Title V permit.

7. "Corette's Title V permit (OP2953-05) expired on August 25, 2010, and the facility has since been unlawfully operating without a valid permit."

COMMENT

Nearly one year after Corette's permit expired, DEQ finally issued a draft Title V permit (OP2953-06) for the facility. (Although Montana law provides an "application shield" that allows facilities to continue operating under an expired permit provided the operator applies for permit renewal within six months prior to the expiration date of the permit, PPL failed to submit a timely application and therefore is currently operating illegally. See ARM 17.8.1221.) MEIC and Sierra Club identified numerous deficiencies with that draft in comments dated June 16, 2011, which are attached as Exhibit 1 and incorporated here by reference. Now, after two years of illegal operation of the Corette plant, DEQ has issued yet another draft permit for public comment. Unfortunately, the new draft permit still fails to require compliance with all emission limitations applicable to the Corette facility and fails to require monitoring that is sufficient to demonstrate compliance with applicable requirements.
[Earthjustice (MEIC/Sierra Club) 9/24/2012]

DEPARTMENT RESPONSE: On April 16, 2010, the Department received a complete Title V Operating permit renewal application from PPLM and it was given application number OP2953-06. ARM 17.8.1205 (2) provides, in part: "To be considered timely for the purposes of this rule, a person required to obtain a permit pursuant to this subchapter shall file an application with the department as follows: … (c) For renewal, a permittee shall submit a complete air quality operating permit application to the department not later than six months prior to the expiration of the existing permit, unless otherwise specified in that permit." Operating Permit OP2953-05 expired on August 25, 2010, and for a renewal application to have been considered timely, PPLM should have submitted it by February 25, 2010.

The Department did receive a complete application on April 16, 2010. In accordance with ARM 17.8.1220(2), which provides, in part:"the department shall take final action on each air quality operating permit application (including a request for permit modification or renewal) within 18 months of receiving a complete application." The Department issued Draft Title V Permit #OP2953-06 on May 16, 2011, with the close of the comment period on June 15, 2011, and was on track to have a complete action within 18 months of receipt of the complete application. The Department received substantial comments regarding the draft permit. The Department understood the need to issue the permit but also felt the nature of the action and the depth of the comments necessitated further review of the comments received and the need to fully respond to the comments along with any changes needed in the permit. The Department worked on preparing responses to comments and on January 17, 2012, the Department requested additional information from PPLM Corette concerning the Compliance Assurance Monitoring (CAM) plan for the facility. The Department received this additional information on March 29, 2012. The Department also received a comment from Earthjustice (MEIC and Sierra Club) requesting that the Department circulate a permit for public review once the draft document was revised based on the comments and responses expected. The Department prepared responses to the comments received on Draft Operating Permit #OP2953-06. The Department made a determination that it was appropriate to issue a draft permit based on the substantive changes made to the CAM plan. The draft permit was assigned #OP2953-07 and issued draft on August 10, 2012. On August 17, 2012, the Department received a request from Earthjustice to extend the public comment period on Draft Operating Permit #OP2953-07. The Department granted this request and approved a 14-day extension to the original 30-day public comment period on Draft Operating Permit #OP2953-07. The updated public comment period allowed for comments to be received from August 10, 2012 to September 24, 2012. The Department is now responding to comments to permit #OP2953-07 and issuing the Proposed Permit to PPLM Corette in this permit action.

The Department has continued to enforce Operating Permit #OP2953-05 and Montana Air Quality Permit #2953-00.

8. "Page 19, Section V. Future Permit Considerations"

COMMENT:
PPLM notes that EPA recently signed a Federal Implementation Plan (FIP) for Regional Haze for the state of Montana and although this FIP has no requirements for further emission controls on the JE Corette Steam Electric Station, it does set new BART limits for Sulfur Dioxide (SO2), Nitrogen Oxides (NOx), and Particulate Matter (PM). The compliance dates of these new limits are: for SO2 and NOx, April 17, 2013; for PM, by November 17, 2012.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: As stated in response number 2 above, the effective date of the rule is October 18, 2012 and compliance with the PM limit is required by November 17, 2012; and NO_x and SO_2 must be achieved within 180 days after the effective date of the Montana's Regional Haze FIP. These requirements pre-date the issuance of this proposed permit action. In accordance with ARM 17.8.1228, "*Additional applicable requirements under the FCAA become applicable to a major source holding a permit with a remaining term of three or more years. Reopening and revision of the permit shall be completed not later than 18 months after promulgation of the applicable requirement."* Although the requirements contained within Montana's Regional Haze FIP are applicable requirements, the Department has up to 18 months following promulgation to have the permit reopened and revised. Inserting limitations required under Montana's Regional Haze FIP within the Title V operating permit is unnecessary at this time.

9. "Page 39, Item 24, Removal of Mercury monitoring requirements"

COMMENT:
PPLM submitted the following comment relevant to mercury monitoring requirements in its June 15, 2011 comments on draft permit # OP2953-06:

"References to Mercury Emission Monitoring System (MEMS) Operating and Performance Requirements in 40 CFR Part 75. EPA, in a March 28 rulemaking (76FR17288), removed the mercury monitoring requirements from 40CFRPart 75. When these deletions are officially adopted by Montana, the references in this permit will be referring to obsolete or non-existent requirements."

The point of this comment was not to suggest any change to the monitoring requirements specific to PPLM in this permit, but to point out the fact that with EPA's removal of the mercury monitoring requirements from 40CFRPart75, the Department's references to these requirements may be in error if it directs the reader to a portion of EPA regulations that no longer exist.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The Department is implementing the requirements of 40 CFR Part 75 as part of implementing ARM 17.8.771. ARM 17.8.771 became effective on October 27, 2006. As part of this rulemaking, the Department incorporated 40 CFR Part 75 as it was written at that time and as it applies to Montana mercury rules. As stated in ARM 17.8.771(12), "…the provisions of 40 CFR Part 75 and Part 60, Appendix B, amended by CAMR, as they pertain to monitoring, recordkeeping, and reporting of mercury emissions, remain in effect as incorporated by reference in ARM 17.8.767(1)." The Department believes that there are no issues as the permit is currently written.

10. "Page 2, Emissions Unit EU1 – Ash Handling System"

COMMENT:
PPLM is requesting a change in the name of this emissions unit (EU). This EU is more correctly identified as "Fly Ash Handling System". We note that in some locations of the permit (P.6 for example), the EU is called "Protocol Ash Handling System". We request that the EU be labeled consistently throughout the permit.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The Department has changed the name of EU1 in the permit to the "fly ash handling system." .

11. "Page 2, EU 7 – JE Corette Boiler"

COMMENT:
PPLM notes that the use of low sulfur coal is a pollution control practice for SO2 and requests this be added to the table.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The Department has added this to both the permit table on page 2 and the TRD on page 7.

12. "Page 7, Conditions B.1 and B.3"

COMMENT:
PPLM requests clarification from the Department in regard to the apparent conflict in allowable opacity for any baghouse, bag filter, or bin vent associated with the fly ash handling system. Condition B.1 specifies 20%, but Condition B.3 specifies 40%.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: Any emissions generated from the points of the baghouse, bag filter, or bin vent associated with the fly ash handling system are limited to a 40% opacity, and opacity compliance is demonstrated by operation of these units. The permit has been clarified to reflect this requirement. All other points with any fugitive emission points associated with the fly ash handling system are limited to a 20% opacity, and compliance is demonstrated by conducting weekly visual surveys and taking appropriate corrective action when necessary as required in the permit.

13. "Page 7, Emissions Unit EU1 and Others, Compliance Demonstration"

COMMENT:
We request the Department to re-evaluate its approach to fugitive source opacity monitoring. In the Compliance Demonstrations, the proposed permit would require corrective action to minimize emissions at 15 percent opacity. PPLM is concerned that these requirements and limits would impose new and more stringent opacity standards in the Title V permit beyond that authorized under the Title V program. In particular, the rules specify that the air quality operating permit "shall include all applicable requirements for all emissions units at a source required to obtain a permit." Mt. Code Ann. 17.8.1204(5). "Applicable requirements" is defined to include pre-existing standards and other requirements under various provisions of the federal Clean Air Act and the Montana State Implementation Plan approved by EPA. But there is no provision for the Title V permit to impose new and more stringent emissions limits with corrective action obligations such as a 15 percent opacity limit.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The Department has set the visual surveys as a monitoring mechanism for the opacity requirements in lieu of frequent Method 9 testing. The Department has clearly stated in the permit that the condition that applies is ARM 17.8.304(2), which limits opacity to <20%. However, the Department cannot elect to implement a compliance demonstration that would result in the source being out of compliance with the applicable requirement. In accordance with ARM 17.8.1212(1)(b), *"Each air quality operating permit shall contain the following requirements with respect to monitoring:…Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the air quality operating permit, as reported pursuant to (3). Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement."*

The Department has established periodic monitoring to determine if the applicable requirement is being met. That is, periodic monitoring is done to measure opacity. The 15% level is not indicative of a violation of the applicable requirement, but rather a level at which some action should be necessary to assure ongoing compliance with the applicable requirement. The Department is consistently applying this method of periodic monitoring on all Title V sources and continues to believe it is an appropriate method for periodic monitoring of the opacity rule. PPL provided no other options for periodic monitoring in relation to the opacity rule, and the Department has maintained the visual survey language in this proposed permit action.

14. "Page 9, Condition C.5."

COMMENT:
The pipeline delivery of natural gas does not involve discrete units of fuel delivery. Therefore the phrase "each fuel delivery" at the end of the first sentence is not relevant and should be deleted.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The Department has made the requested change.

15. "Page 9, Coal Handling System, table of Conditions, Permit Limits, etc., last row – PM."

COMMENT:
Compliance Method and Frequency appear to be in error and we suggest these items should correctly read: "Method 5" for the Method and "As requested by the Department" for the Frequency.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The Department has not made the requested change. The Department does not believe that a Method 5 would be possible on this unit. Also, the Department has determined that the frequency of "as required by the Department" would not be an appropriate compliance demonstration frequency for this applicable requirement. The Department has maintained the visual survey requirements for this unit as the appropriate compliance demonstration with a frequency of weekly.

16. "Page 12, EU5 – Gasoline Storage Tank, Pollutant/Parameter description."

COMMENT:
1). The word "Underground" should be removed since this tank is above-ground. 2). The correct Compliance Demonstration Method is "Submerged fill pipe". This tank is not equipped with a vapor loss control device and is not a pressure tank and these terms should be deleted.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The Department has made the requested changes.

17. "Page 12, Condition F.3."

COMMENT:
To make this condition consistent with similar conditions for other EUs, we request this condition be changed to the following: "PPLM shall maintain on site a log to monitor date and time of loading when the submerged fill pipe was not used."
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: Because the compliance demonstration is the use of the submerged fill pipe, the Department believes that the compliance demonstration log should contain the information pertinent to any loading being conducted. The Department therefore did not make the requested change.

18. "Page 13, Compliance Demonstration Method for the Pollutant/Parameter "Sulfur in Fuel" in the fourth row of the table."

COMMENT:
PPLM requests a change from the term "CEMS" to "Fuel Sampling" in order to accurately describe the Compliance Demonstration currently in use.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: PPLM Corette is still required to operate and maintain the CEMS, and CEMS data is used to determine compliance for PPLM Corette. However, the Department has also added a requirement that PPLM measure and record the percentage of sulfur in the coal, and that PPLM submit quarterly summaries of this information.

19. "Page 13, Mercury Applicable Requirements (last row of table)."

COMMENT:
PPLM requests confirmation from the Department that this is a state-only requirement and requests that this be so noted in the permit.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The Department has denoted the Montana mercury related conditions and associated compliance demonstration and recordkeeping and reporting requirements as state-only in this proposed permit. This was also referenced in response to comment number 6 above.

20. "Page 17 and 18, Conditions G.36, G41, and G45.b; Appendices J and K, OMP and CAM Plans."

COMMENT:
PPLM requests clarification of the compliance and monitoring requirements for PM Compliance Assurance Monitoring (CAM). PPLM believes that the March 28, 2012 PM CAM plan, Revision 1, as submitted, embodies the CAM requirements, and should be the sole document included in the permit and referenced for PM CAM requirements. PPLM believes this clarification can be justified for the following reasons.

The referenced Operation Modification Plans (OMP) and the CAM plan serve the same purpose – to assure continuous compliance by monitoring the operation of plant and control equipment in order to maintain operating parameters within optimal ranges. The 1997 CAM plan requirements were promulgated in order that "…facility owners will be able to assure state and local agencies, EPA, and the public that they comply with established emissions standards…" *EPA CAM Fact Sheet, 10-3-97*. A key element of the OMP is that "The Plan contains provisions to assure continuous compliance during future operation with a high level of confidence that compliance with the standards will be achieved." *OMP Revision 4, December 18, 1991*.

PPLM's CAM plan as submitted reflects the most up to date information on emissions and their relationship to the applicable plant operating parameters. For example, the OMP refers to flue gas conditioning chemicals, which are no longer utilized by the plant. Also, the plant now consumes coal from a different source and has updated plant and pollution controls. In addition, 40 CFR Part 75 contains updated and more rigorous monitoring requirements which are applicable to Corette. Consequently, the CAM plan provides the most reliable assurance of compliance.

The CAM plan brings forward from the OMP the opacity compliance requirements of 17% (daily), 23% (hourly) and 40% (six-minute); the PM standard (0.26 #/MMBtu nominal), and twice yearly testing requirements; the relevant updated optimal plant operating parameters of minimum total ESP powers (150 KVA), maximum flue gas exit temperature (290°F), maximum coal ash content (10#/MMBtu); the relevant monitor QA/QC procedures, requirements (which have been augmented by the current 40CFRPart 75); and also adds an opacity action level (14%). The resulting monitoring, operational and reporting requirements are at least as stringent and reliable as the OMP requirements, and reflect the most current data and plant operating conditions.

We note also that with regard to plant operating practices, the OMP provides for "chang[es] at any time as long as the opacity and mass emission standards in this plan are adhered to," *OMP Revision 4, December 18, 1991*. This provision allows for necessary updates to plant operation parameters to reflect good air pollution practice. Note that PPLM is not proposing to change the referenced opacity and emission standards.

Although PPLM is not necessarily recommending keeping Appendix K as re-written by the Department we note that in the Table on Page K-1, the "Performance Indicator Range" for Coal Ash Content should read "Train Average <10 lb/MMBtu".
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The Department acknowledges that the CAM Plan as well as the rest of the Title V requirements should be the governing document that would replace the OMP. The only exception is a requirement for specific testing based on a specific result of a malfunction contained in a

1991 court order, which has now become part of the permit in Section III.G.17. The OMP predated both the Title V permit and the requirements to have a CAM Plan. The OMP resulted from a violation of the particulate matter limitation. The CAM Plan is required to ensure that the particulate air pollution control device (an electrostatic precipitator, or ESP) is operating properly; thus the resulting operation of the facility should be in compliance with the particulate limit. PPLM is also required to continue the semi-annual performance tests, which demonstrate compliance with the particulate matter limit. The Department has maintained the CAM Plan in Appendix K in this proposed action. The Department agrees with PPL that compliance with the CAM Plan means compliance with the OMP. The Department has made clarifications in the permit as well as provided additional information in the TRD to reflect this position. However, because the OMP was established and modified under existing court orders, the Department does not have the unilateral authority under the Title V regulations to eliminate the existence of the OMP.

21. "Page 20, EU9 – Emergency Diesel Generator, Pollutant/Parameter, Permit Limit, and Compliance Demonstration Method for Sulfur Compounds."

COMMENT:
Since the generator uses liquid diesel, the specifications in the third row of the table and condition I.3 should be changed to reflect the use of liquid fuel.

Additionally, we note an inconsistency between the Title V requirements for these Emergency Diesel Generators and the Diesel Emergency Generators at Colstrip. We ask that the Department review these requirements and ensure consistency between the two sources.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The Department has made changes to ensure that the correct conditions are included and that both the permits for PPLM Colstrip and PPLM Corette are streamlined.

22. "Page 21, Condition I.9."

COMMENT:
As the Department is aware, due to the proprietary nature of the diesel formulation and resulting confidentiality concerns on the part of the fuel supplier, a detailed fuel analysis has been difficult to obtain. In past compliance inspections, a Material Safety Data Sheet (MSDS) which listed percent sulfur was satisfactory to the Department. We ask that the Department include this option in condition I.9.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The Department has made the requested change.

23. "Page 21 and 22, EU10 – Diesel Tank."

COMMENT:
We request that this source be moved to the insignificant list in light of the de-minimus nature of the emissions and to be consistent with the treatment of diesel tanks at other sources.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The 1,000 gallon diesel tank meets the requirements of an insignificant emitting unit and has been moved to Appendix A as IEU10 of the permit.

24. "Appendix D, Air Quality Inspector Information."

COMMENT:
We request that the following modifications to the information be made: 1) On page D-1, under "Danger Signs (Red, Black, and White)" add to the existing wording this sentence: "Entry by Authorized Persons

Only." 2) On page D-2, under Smoking Policy, replace the existing wording with the following wording: "Smoking not allowed inside any plant building."
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: The Department has made the requested changes.

25. "Page L-2, Item c.(1) (b), Mercury 12-month rolling average calculation."

COMMENT:
PPLM requests the Department to consider allowing by permit alternate methods of calculating a 12-month rolling average. The Department specifies monitoring to be conducted per 40CFRPart75. Part 75 specifies calculating of average values using all valid hourly data in a particular period. Yet the Department requires the 12-month rolling average be calculated using 12 monthly averages. Using the monthly average method has the risk of yielding non-representative results, since the average is not weighted to account for actual unit operation (e.g. – a monthly average with only 1 valid hour of unit operation is given as much weight as a monthly average with a full month's operation).

In order to ensure that a 12 month rolling average is as representative as possible, the Department should allow use of the methodology that best reflects a given operational scenario.
[PPLM 9/24/2012]

DEPARTMENT RESPONSE: Attachment 2 in MAQP #2953-00 would need to be updated prior to any changes being made to the Mercury Emission Monitoring Systems (MEMS) Appendix in the Title V permit because the MAQP attachment is the underlying requirement/authority for the same attachment being in the Title V permit appendix.