



Montana Department of
ENVIRONMENTAL QUALITY

Brian Schweitzer, Governor

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December 6, 2010

Andrea L. Stomberg
Montana-Dakota Utilities Co.
400 North Fourth Street
Bismark, ND 58501

RE: Final Title V Operating Permit #OP0691-05

Dear Ms. Stromberg:

The Department of Environmental Quality has prepared the enclosed Final Operating Permit #OP0691-05, for Montana-Dakota Utilities, Inc. Lewis and Clark Station, located in the Southwest ¼ of Section 9, Township 22 North, Range 59 East, in Richland County, Montana. Please review the cover page of the attached permit for information pertaining to the action taking place on Permit #OP0691-05.

If you have any questions, please contact Shawn Juers, the permit writer, at (406) 444-2049 or by email at sjuers@mt.gov.

Sincerely,

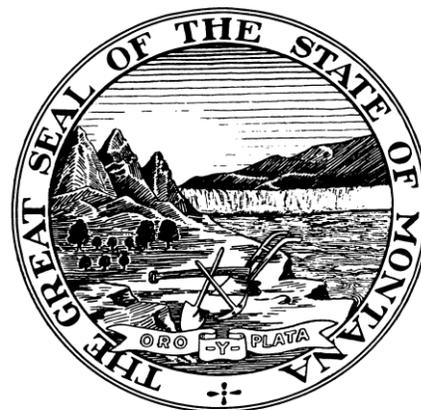
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VW:SJ
Enclosure

cc: Christopher Ajayi, US EPA Region VIII 8P-AR
Carson Coate, US EPA Region VIII, Montana Office

STATE OF MONTANA
Department of Environmental Quality
Helena, Montana 59620



AIR QUALITY OPERATING PERMIT OP0691-05

Issued to: Montana-Dakota Utilities Co.
Lewis and Clark Station
400 North Fourth Street
Bismark, ND 58501

Final Date: December 4, 2010
Expiration Date: August 24, 2014

Effective Date: December 4, 2010
Date of Decision: November 3, 2010

Request Deemed Technically Complete: June 21, 2010 and August 31, 2010
Request Deemed Administratively Complete: June 21, 2010 and August 31, 2010
Administrative Amendment Request Received: May 24, 2010 and August 31, 2010
AFS Number: 030-053-0002A

Permit Issuance and Appeal Processes: In accordance with Montana Code Annotated (MCA) Sections 75-2-217 and 218 and the Administrative Rules of Montana (ARM), ARM Title 17, Chapter 8, Subchapter 12, Operating Permit Program, this operating permit is hereby issued by the Department of Environmental Quality (Department) as effective and final on December 4, 2010. This cover sheet must be attached to the Date of Decision issued on November 3, 2010, and the permit must be kept on-site at the above named facility.

Montana Air Quality Operating Permit
 Department of Environmental Quality

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Terms not otherwise defined in this permit or in the Definitions and Abbreviations Appendix of this permit have the meaning assigned to them in the referenced regulations.

SECTION I. GENERAL INFORMATION

The following general information is provided pursuant to ARM 17.8.1210(1).

Company Name: Montana Dakota Utilities Co., Lewis & Clark Station

Mailing Address: 400 North Fourth Street

City: Bismarck State: North Dakota Zip: 58501

Plant Location: Southwest ¼, Section 9, Township 22 North, Range 59 East, Richland County, Montana

Responsible Official: Andrea Stomberg Phone: (701) 222-7752

Facility Contact Person: Abbie Kresbach Phone: (701) 222-7844

Primary SIC Code: 4911

Nature of Business: Electric Services

Description of Process: MDU operates a tangential coal-fired boiler capable of burning coal or natural gas and associated equipment for generation of electricity.

SECTION II. SUMMARY OF EMISSION UNITS

The emission units regulated by this permit are the following (ARM 17.8.1211):

| Emissions Unit ID | Description | Pollution Control Device/Practice |
|--------------------------|--|---|
| EU01 | Tangential Coal and Natural Gas Fired Boiler | Multi-Cyclone and Flooded Disc Wet Scrubber |
| EU06 | Fuel (gasoline) Storage Tank | None |
| EU07 | Coal Storage Piles | None |
| EU08 | Fugitive Coal, Ash, and Lime Handling | None |

SECTION III. PERMIT CONDITIONS

The following requirements and conditions are applicable to the facility or to specific emissions units located at the facility (ARM 17.8.1211, 1212, and 1213).

A. Facility-Wide

| Conditions | Rule Citation | Rule Description | Pollutant/Parameter | Limit |
|------------|-----------------|--|--|--|
| A.1 | ARM 17.8.105 | Testing Requirements | Testing Requirements | ----- |
| A.2 | ARM 17.8.304(1) | Visible Air Contaminants | Opacity | 40% |
| A.3 | ARM 17.8.304(2) | Visible Air Contaminants | Opacity | 20% |
| A.4 | ARM 17.8.308(1) | Particulate Matter, Airborne | Fugitive Opacity | 20% |
| A.5 | ARM 17.8.308(2) | Particulate Matter, Airborne | Reasonable Precautions | ----- |
| A.6 | ARM 17.8.308 | Particulate Matter, Airborne | Reasonable Precaution, Construction | 20% |
| A.7 | ARM 17.8.309 | Particulate Matter, Fuel Burning Equipment | Particulate Matter | $E = 0.882 * H^{-0.1664}$ Or $E = 1.026 * H^{-0.233}$ |
| A.8 | ARM 17.8.310 | Particulate Matter, Industrial Processes | Particulate Matter | $E = 4.10 * P^{0.67}$ or $E = 55 * P^{0.11} - 40$ |
| A.9 | ARM 17.8.322(4) | Sulfur Oxide Emissions, Sulfur in Fuel | Sulfur in Fuel (liquid or solid fuels) | 1 lb/MMBtu fired |
| A.10 | ARM 17.8.322(5) | Sulfur Oxide Emissions, Sulfur in Fuel | Sulfur in Fuel (gaseous) | 50 gr/100 CF |
| A.11 | ARM 17.8.324(3) | Hydrocarbon Emissions, Petroleum Products | Gasoline Storage Tanks | ----- |
| A.12 | ARM 17.8.324 | Hydrocarbon Emissions, Petroleum Products | 65,000 Gallon Capacity | ----- |
| A.13 | ARM 17.8.324 | Hydrocarbon Emissions, Petroleum Products | Oil-effluent Water Separator | ----- |
| A.14 | ARM 17.8.342 | NESHAPs General Provisions | SSM Plans | Submittal |
| A.15 | ARM 17.8.1212 | Reporting Requirements | Prompt Deviation Reporting | ----- |
| A.16 | ARM 17.8.1212 | Reporting Requirements | Compliance Monitoring | ----- |
| A.17 | ARM 17.8.1207 | Reporting Requirements | Annual Certification | ----- |

Conditions

A.1. Pursuant to ARM 17.8.105, any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

Compliance demonstration frequencies that list “as required by the Department” refer to ARM 17.8.105. In addition, for such sources, compliance with limits and conditions listing “as required by the Department” as the frequency, is verified annually using emission factors and engineering calculations by the Department’s compliance inspectors during the annual emission inventory review; in the case of Method 9 tests, compliance is monitored during the regular inspection by the compliance inspector.

A.2. Pursuant to ARM 17.8.304(1), MDU shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.

- A.3. Pursuant to ARM 17.8.304(2), MDU shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.
- A.4. Pursuant to ARM 17.8.308(1), MDU shall not cause or authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control emissions of particulate matter are taken. Such emissions of airborne particulate matter from any stationary source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.
- A.5. Pursuant to ARM 17.8.308(2), MDU shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne particulate matter, unless otherwise specified by rule or in this permit.
- A.6. Pursuant to ARM 17.8.308, MDU shall not operate a construction site or demolition project unless reasonable precautions are taken to control emissions of airborne particulate matter. Such emissions of airborne particulate matter from any stationary source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.
- A.7. Pursuant to ARM 17.8.309, unless otherwise specified by rule or in this permit, MDU shall not cause or authorize particulate matter caused by the combustion of fuel to be discharged from any stack or chimney into the outdoor atmosphere in excess of the maximum allowable emissions of particulate matter for existing fuel burning equipment and new fuel burning equipment calculated using the following equations:

For existing fuel burning equipment (installed before November 23, 1968):

$$E = 0.882 * H^{-0.1664}$$

For new fuel burning equipment (installed on or after November 23, 1968):

$$E = 1.026 * H^{-0.233}$$

Where H is the heat input capacity in million BTU (MMBtu) per hour and E is the maximum allowable particulate emissions rate in pounds per MMBtu.

- A.8. Pursuant to ARM 17.8.310, unless otherwise specified by rule or in this permit, MDU shall not cause or authorize particulate matter to be discharged from any operation, process, or activity into the outdoor atmosphere in excess of the maximum hourly allowable emissions of particulate matter calculated using the following equations:

$$\begin{array}{ll} \text{For process weight rates up to 30 tons per hour:} & E = 4.10 * P^{0.67} \\ \text{For process weight rates in excess of 30 tons per hour:} & E = 55.0 * P^{0.11} - 40 \end{array}$$

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

- A.9. Pursuant to ARM 17.8.322(4), MDU shall not burn liquid or solid fuels containing sulfur in excess of 1 pound per million BTU fired, unless otherwise specified by rule or in this permit.
- A.10. Pursuant to ARM 17.8.322(5), MDU shall not burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions, unless otherwise specified by rule or in this permit.

- A.11. Pursuant to ARM 17.8.324(3), MDU shall not load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device or is a pressure tank as described in ARM 17.8.324(1), unless otherwise specified by rule or in this permit.
- A.12. Pursuant to ARM 17.8.324, unless otherwise specified by rule or in this permit, MDU shall not place, store or hold in any stationary tank, reservoir or other container of more than 65,000 gallon capacity any crude oil, gasoline or petroleum distillate having a vapor pressure of 2.5 pounds per square inch absolute or greater under actual storage conditions, unless such tank, reservoir or other container is a pressure tank maintaining working pressure sufficient at all times to prevent hydrocarbon vapor or gas loss to the atmosphere, or is designed and equipped with a vapor loss control device, properly installed, in good working order and in operation.
- A.13. Pursuant to ARM 17.8.324, unless otherwise specified by rule or in this permit, MDU shall not use any compartment of any single or multiple-compartment oil-effluent water separator, which compartment receives effluent water containing 200 gallons a day or more of any petroleum product from any equipment processing, refining, treating, storing or handling kerosene or other petroleum product of equal or greater volatility than kerosene, unless such compartment is equipped with a vapor loss control device, constructed so as to prevent emission of hydrocarbon vapors to the atmosphere, properly installed, in good working order and in operation.
- A.14. Pursuant to ARM 17.8.342 and 40 CFR 63.6, MDU 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.
- A.15. MDU shall promptly report deviations from permit requirements including those attributable to upset conditions, as upset is defined in the permit. To be considered prompt, deviations shall be reported to the Department using the schedule and content as described in Section V.E (unless otherwise specified in an applicable requirement) (ARM 17.8.1212).
- A.16. On or before February 15 and August 15 of each year, MDU shall submit to the Department the compliance monitoring reports required by Section V.D. These reports must contain all information required by Section V.D, as well as the information required by each individual emissions unit. For the reports due by February 15 of each year, MDU may submit a single report, provided that it contains all the information required by Section V.B & V.D. Per ARM 17.8.1207,

any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12 (including semiannual monitoring reports), shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that, “based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.”

A.17. By February 15 of each year, MDU shall submit to the Department the compliance certification required by Section V.B. The annual certification required by Section V.B must include a statement of compliance based on the information available which identifies any observed, documented or otherwise known instance of noncompliance for each applicable requirement. Per ARM 17.8.1207,

any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12 (including annual certifications), shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that, “based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.”

B. EU01: Tangential Coal-Fired Boiler (Coal and Natural Gas)

| Condition(s) | Pollutant/Parameter | Permit Limit | Compliance Demonstration Method | Frequency | Reporting Requirements |
|--|--|---|---|-------------------------------|------------------------|
| B.1, B.11, B.12, B.23, B.24, B.26, B.34, .B35, B.36 | Opacity | 40% | Method 9 | As Required by the Department | Semiannual |
| | | | Predictive Opacity | Ongoing | Quarterly |
| B.2, B.13, B.23, B.24, B.34, .B35, B.36 | Particulate Matter Fuel Burning | 0.17 lb/MMBtu | Method 5 | Annual | Semiannual |
| | | 0.08 gr/dscf | | | |
| B.3, B.4, B.14, B.15, B.16, B.25, B.27, B.28, B.35, B.36 | SO ₂ Emissions | 1.0 lb sulfur/MMBtu fuel or 2.0 lb SO ₂ /MMBtu | Continuous Scrubber Operations and CEMS | Ongoing | Semiannual |
| | | 50 gr sulfur/100 CF fuel | Record Keeping | Ongoing | Semiannual |
| B.5, B.17, B.28, .B35, B.36 | NO _x Emissions/Acid Rain Provisions | 0.40 lb/MMBtu | CEMS | Ongoing | Semiannual |
| B.6, B.18, B.29, .B35, B.36 | Acid Rain Provisions | 40 CFR 72-78 | 40 CFR 72-78 | 40 CFR 72-78 | Semiannual |
| B.7, B.19, B.30, .B35, B.36 | PM CAM Plan | ARM 17.8.1506 | Provisions from CAM Plan, Appendix I | Ongoing | Semiannual |
| B.8, B.20, B.31, .B35, B.36 | Mercury Emissions | 1.5 lb/TBtu | MEMS | Ongoing | Semiannual |
| B.9, B.21, B.32, .B35, B.36 | Mercury Emission Control Equipment | OAI and ACI Systems | Log | Ongoing | Semiannual |
| B.10, B.22, B.33, .B35, B.36 | 40 CFR Part 75 | 40 CFR Part 75 | 40 CFR Part 75 | Ongoing | Semiannual |

Conditions

- B.1. MDU may not cause or authorize emissions from the Tangential Coal-Fired Boiler (boiler) to be discharged into the outdoor atmosphere that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304 (2)).
- B.2. Particulate matter emissions from the boiler shall not exceed 0.17 lb/MMBtu or 0.08 gr/dscf (ARM 17.8.309).
- B.3. MDU shall not fire in the boiler liquid or solid fuels containing sulfur in excess of 1.0 lb of sulfur/MMBtu fuel or 2.0 lb SO₂/MMBtu (ARM 17.8.322(4)).
- B.4. MDU shall not fire in the boiler any fuels in excess of 50 grains of sulfur/100 cubic feet of gaseous fuel (ARM 17.8.322).
- B.5. NO_x emissions from the boiler shall not exceed 0.40 lb/MMBtu (40 CFR 76.7).
- B.6. MDU shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements of the Acid Rain Program contained in 40 CFR 72-78 (40 CFR 72-78).
- B.7. MDU shall provide a reasonable assurance of compliance with emission limitations or standards for the anticipated range of operations at the Tangential Coal-fired Boiler for PM (ARM 17.8.1504).
- B.8. Beginning January 1, 2010, MDU shall limit mercury emissions from Unit 1 to an emission rate equal to or less than 1.5 pounds mercury per trillion British thermal units (lb/TBtu), calculated as a rolling 12-month average (ARM 17.8.771).
- B.9. MDU shall install an oxidizing agent injection (OAI) system and an activated carbon injection (ACI) system. MDU shall implement the operation and maintenance of the OAI and ACI systems on or before January 1, 2010 (ARM 17.8.771).
- B.10. MDU shall comply with all applicable standards and limitations, and the applicable operating, reporting, recordkeeping, and notification requirements contained in 40 CFR Part 75 (ARM 17.8.771).

Compliance Demonstration

- B.11. MDU shall perform a Method 9 opacity test on the boiler annually or as required by the Department while the boiler is being fired exclusively on coal to monitor compliance with the opacity limitation in Section III.B.1 (ARM 17.8.749 and ARM 17.8.106).
- B.12. MDU shall operate and maintain the predictive opacity monitoring system to monitor compliance with the opacity limitation in Section III.B.1. The monitoring system operation shall be performed in accordance with the Predictive Opacity Appendix E of this permit (40 CFR Part 51, Appendix P, §3.9 and ARM 17.8.749).
- B.13. MDU shall perform a Method 5 or Method 5B particulate matter test, or another method approved by the Department, on the boiler annually to monitor compliance with the particulate matter fuel burning limit in Section III.B.2. The testing shall be performed in accordance with the Montana Source Test Protocol and Procedures Manual while the boiler is being fired exclusively on coal (ARM 17.8.749 and ARM 17.8.106).

- B.14. MDU shall operate the scrubber when the boiler is operating to monitor compliance with the emission limit in III.B.3 (ARM 17.8.322(6)(c)).
- B.15. MDU shall monitor compliance with emission limits in III.B.3 pursuant to the requirements in 40 CFR Part 75, and the SO₂ CEMS Appendix F in this permit (ARM 17.8.1212).
- B.16. MDU shall burn only pipeline quality natural gas in the emissions unit when burning gaseous fuel to monitor compliance with the emission limit of 50 grains of sulfur/100 cf of gaseous fuel (ARM 17.8.1213).
- B.17. MDU shall monitor compliance with emission limits in III.B.5 pursuant to the requirements in 40 CFR Part 75, 40 CFR Part 76 and the NO_x CEMS Appendix G in this permit (ARM 17.8.1212).
- B.18. Compliance monitoring for the applicable requirements contained in 40 CFR 72-78 shall be accomplished as described in 40 CFR 72-78 (40 CFR 72-78 and ARM 17.8.1213).
- B.19. MDU shall monitor compliance by following the Compliance Assurance Monitoring (CAM) Plan (Appendix I). The CAM Plan, written by MDU in accordance with ARM 17.8.1504 is summarized in Appendix I and is available in full upon request by the Department or the facility (ARM 17.8.1503 and ARM 17.8.1213).
- B.20. In order to monitor compliance with the mercury emission limit in III.B.8, a mercury emissions monitoring system (MEMS) shall be installed, certified, and operating on the Unit 1 stack outlet on or before January 1, 2010. Said monitor shall comply with the applicable provisions of 40 CFR Part 75. The MEMS shall also conform to requirements included in Appendix J (ARM 17.8.1213).
- B.21. Monitoring compliance with the requirements for the installation and operation of OAI and ACI systems shall be accomplished through recordkeeping (ARM 17.8.1213).
- B.22. Compliance monitoring for the operating, reporting, recordkeeping, and notification requirements contained in 40 CFR Part 75 shall be accomplished as described in 40 CFR 75 (ARM 17.8.340 and 40 CFR 75).

Recordkeeping

- B.23. MDU shall maintain, on site, an operations and maintenance log which includes the type of fuel fired in the boiler on a daily basis (ARM 17.8.1212).
- B.24. All source testing recordkeeping shall be performed in accordance with the Source Test Protocol and Procedures Manual, and shall be maintained on site. Method 9 source test reports for opacity need not be submitted unless requested by the Department (ARM 17.8.106).
- B.25. MDU shall maintain, on site, a log of scrubber downtime and maintenance with respect to boiler operations (ARM 17.8.1212).
- B.26. MDU shall perform recordkeeping in accordance with the Predictive Opacity Monitoring System Appendix E of this permit (ARM 17.8.1212).
- B.27. MDU shall verify that only pipeline quality natural gas is being burned in the boiler by maintaining a log of the Federal Energy Regulatory Commission (FERC) certifications (ARM 17.8.1212).

- B.28. MDU shall perform recordkeeping as required in Appendix F and Appendix G of this permit as well as in accordance with 40 CFR Parts 75 and 76, as applicable (ARM 17.8.1212 and 40 CFR Parts 75 and 76).
- B.29. MDU shall perform recordkeeping in accordance with 40 CFR 72-78, as applicable and as required by Appendices G and H of this permit (40 CFR 72-78 and ARM 17.8.1212).
- B.30. Records shall be prepared and data kept in accordance with 40 CFR Part 64 and the CAM Appendix I of this permit (ARM 17.8.1212 and 40 CFR 64).
- B.31. Records shall be prepared and data kept in accordance with 40 CFR Part 75 and the MEMS Appendix J of this permit (ARM 17.8.1212 and 40 CFR 75).
- B.32. For any time after January 1, 2010, MDU shall record in a log the date, time, and duration of any incident where the OAI and ACI systems are not maintained or operational (ARM 17.8.1212).
- B.33. MDU shall perform recordkeeping in accordance with 40 CFR Part 75 (ARM 17.8.1212 and 40 CFR Part75).

Reporting

- B.34. Any compliance source tests shall be submitted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
- B.35. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- B.36. The semiannual reporting shall provide (ARM 17.8.1212):
 - a. A summary of results of any source test that was performed during the reporting period;
 - b. A summary of the log of fuel type used to fire the boiler;
 - c. A summary of any downtime and maintenance work performed on the wet scrubber;
 - d. Certification of submittal of the quarterly reports required in Appendices E, F, G, and J ;
 - e. A summary of compliance with 40 CFR Part 64 and Appendix I of this permit;
 - f. A summary of the log when the OAI and ACI systems were not maintained or operational: and
 - g. A summary of compliance with the requirements of 40 CFR 72-78, as applicable.

C. EU06: Fuel (gasoline) Storage Tank

| Condition(s) | Pollutant/Parameter | Permit Limit | Compliance Demonstration | | Reporting Requirement |
|-------------------------|---------------------------|---------------------------|---------------------------|-----------|-----------------------|
| | | | Method | Frequency | |
| C.1, C.2, C.3, C.4, C.5 | 40 CFR 63, Subpart CCCCCC | 40 CFR 63, Subpart CCCCCC | 40 CFR 63, Subpart CCCCCC | Ongoing | Semiannual |

Conditions

C.1. MDU shall comply with all applicable standards and limitations, and the applicable operating, reporting, recordkeeping, and notification requirements contained in 40 CFR 63, Subpart CCCCCC (ARM 17.8.340 and 40 CFR 63, Subpart CCCCCC).

Compliance Demonstration

C.2. Compliance monitoring for the operating, reporting, recordkeeping, and notification requirements contained in 40 CFR 63, Subpart CCCCCC shall be accomplished as described in 40 CFR 63, Subpart CCCCCC (ARM 17.8.340 and 40 CFR 63, Subpart CCCCCC).

Recordkeeping

C.3. MDU shall perform recordkeeping in accordance with 40 CFR 63, Subpart CCCCCC (ARM 17.8.1212 and 40 CFR 63, Subpart CCCCCC).

Reporting

C.4. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

C.5. The semiannual reporting shall provide a summary of compliance with 40 CFR 63, Subpart CCCCCC.

D. EU07: Coal Storage Piles

| Condition(s) | Pollutant/Parameter | Permit Limit | Compliance Demonstration | | Reporting Requirement |
|--|---------------------|--------------------------------|--------------------------|------------------------|-----------------------|
| | | | Method | Frequency | |
| D.1, D.2, D.3, D.4, D.5, D.6, D.7, D.8 | Opacity | 40% and Reasonable Precautions | Method 9 | Semiannual | Semiannual |
| | | | Visual Surveys | Once per Calendar Week | Semiannual |

Conditions

D.1. MDU may not cause or authorize emissions from the Coal Storage Piles to be discharged into the outdoor atmosphere that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304(1)).

D.2. MDU shall not cause or authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control emissions of particulate matter are taken. Such emissions of airborne particulate from any stationary source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.308(1)).

Compliance Demonstration

- D.3 MDU shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on Coal Storage Piles. Under the visual survey option, once per calendar week, during daylight hours, MDU shall visually survey Coal Storage Piles for any visible emissions. If visible emissions are observed during the visual survey, MDU must take corrective action to contain or minimize the source of emissions. Following the corrective action, MDU shall again visually survey the Coal Storage Piles for any visible emissions. If visible emissions remain, MDU shall conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions following the corrective action. The person conducting the visual survey shall record the results of the survey (including any corrective action taken and the results of any Method 9 source test performed) in a log. Conducting a visual survey does not relieve MDU of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then MDU shall perform the Method 9 source tests on Coal Storage Piles for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater, then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

Recordkeeping

- D.4 All source test recordkeeping shall be performed in accordance with the test method used and the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
- D.5 If visual surveys are performed, MDU shall maintain a log to verify that the visual surveys were performed as specified in Section III.D.3. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.1212).

Reporting

- D.6 All source test reports must be submitted to the Department in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
- D.7 The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- D.8 The semiannual reporting shall provide (ARM 17.8.1212):
- a. A summary of the visual survey log as required by Section III.D.3 or Method 9 source test results, and
 - b. A summary of the log of corrective actions maintained as required by Section III.D.5.

E. EU08: Fugitive Coal, Ash, and Lime Handling

| Condition(s) | Pollutant/Parameter | Permit Limit | Compliance Demonstration Method | Frequency | Reporting Requirement |
|--|---------------------|--------------------------------|---------------------------------|------------------------|-----------------------|
| E.1, E.2, E.3, E.4, E.5, E.6, E.7, E.8 | Opacity | 40% and Reasonable Precautions | Method 9 | Semiannual | Semiannual |
| | | | Visual Surveys | Once per Calendar Week | Semiannual |

Conditions

- E.1. MDU may not cause or authorize emissions from the fugitive coal, ash, and lime handling to be discharged into the outdoor atmosphere that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304(1)).
- E.2. MDU shall not cause or authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control emissions of particulate matter are taken. Such emissions of airborne particulate from any stationary source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.308(1)).

Compliance Demonstration

- E.3 MDU shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on the coal, ash, and lime handling. Under the visual survey option, once per calendar week, during daylight hours, MDU shall visually survey the coal, ash, and lime handling for any visible emissions. If visible emissions are observed during the visual survey, MDU must take corrective action to contain or minimize the source of emissions. Following the corrective action, MDU shall again visually survey the coal, ash, and lime handling for any visible emissions. If visible emissions remain, MDU shall conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions following the corrective action. The person conducting the visual survey shall record the results of the survey (including any corrective action taken and the results of any Method 9 source test performed) in a log, Conducting a visual survey does not relieve MDU of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then MDU shall perform the Method 9 source tests on the coal, ash, and lime handling for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater, then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

Recordkeeping

- E.4. All source test recordkeeping shall be performed in accordance with the test method used and the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

- E.5. If visual surveys are performed, MDU shall maintain a log to verify that the visual surveys were performed as specified in Section III.E.3. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.1212).

Reporting

- E.6. All source test reports must be submitted to the Department in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
- E.7. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- E.8. The semiannual reporting shall provide (ARM 17.8.1212):
- a. A summary of the visual survey log as required by Section III.E.3 or Method 9 source test results; and
 - b. A summary of the log of corrective actions maintained as specified by Section III.E.5.

SECTION IV. NON-APPLICABLE REQUIREMENTS

Air Quality Administrative Rules of Montana (ARM) and Federal Regulations identified as not applicable to the facility or to a specific emissions unit at the time of the permit issuance are listed below (ARM 17.8.1214). The following list does not preclude the need to comply with any new requirements that may become applicable during the permit term.

A. Facility-Wide

The following table contains non-applicable requirements which are administrated by the Air Resources Management Bureau of the Department of Environmental Quality.

| Rule Citation | | Reason |
|--|--|---|
| State | Federal | |
| ARM 17.8.321, ARM 17.8.323, ARM 17.8.610 | | These rules are not applicable because the facility is not listed in the source category cited in the rules. |
| ARM 17.8.320 | | These rules are not applicable because the facility does not have the specific emissions unit cited in the rules. |
| | 40 CFR 60, Subparts C, Ca, Cb 40 CFR 60, Subparts D, Da, Db, Dc 40 CFR 60, Subparts E-J 40 CFR 60, Subparts K, Ka, Kb 40 CFR 60, Subparts L-Z 40 CFR 60, Subparts AA-EE 40 CFR 60, Subparts GG-HH 40 CFR 60, Subparts KK-NN 40 CFR 60, Subparts PP-XX 40 CFR 60, Subparts AAA-BBB 40 CFR 60, Subpart DDD 40 CFR 60, Subparts FFF-LLL 40 CFR 60, Subparts NNN-VVV 40 CFR 60, Subpart WWW 40 CFR 60, Subparts AAAA-FFFF 40 CFR 60, Subparts IIII-KKKK 40 CFR 61, Subparts B-F 40 CFR 61, Subparts H-L 40 CFR 61, Subparts N-R 40 CFR 61, Subpart T 40 CFR 61, Subparts V-W 40 CFR 61, Subpart Y 40 CFR 61, Subpart BB 40 CFR 61, Subpart FF | These requirements are not applicable because the facility is not an affected source as defined in these regulations. |
| | 40 CFR 63, Subparts F-I 40 CFR 63, Subpart J 40 CFR 63, Subparts L-Q 40 CFR 63, Subparts Q-U 40 CFR 63, Subparts W-Y 40 CFR 63, Subparts AA-EE 40 CFR 63, Subparts GG-MM 40 CFR 63, Subparts OO-YY 40 CFR 63, Subparts CCC-EEE 40 CFR 63, Subparts GGG-JJJ 40 CFR 63, Subparts LLL-RRR | These requirements are not applicable because the facility is not an affected source as defined in these regulations. |

| Rule Citation | | Reason |
|---------------|--|--------|
| State | Federal | |
| | 40 CFR 63, Subparts TTT-VVV 40 CFR 63, Subpart XXX 40 CFR 63, Subpart AAAA 40 CFR 63, Subparts CCCC-KKKK 40 CFR 63, Subparts MMMM- NNNNN 40 CFR 63, Subparts PPPPP-TTTTTT 40 CFR 63, Subpart WWWW 40 CFR 63, Subparts YYYYY- ZZZZZ 40 CFR 63, Subpart BBBB 40 CFR 63, Subparts DDDDD- HHHHH 40 CFR 63, Subparts LLLLLL- TTTTTT 40 CFR 63, Subparts WWWW- XXXXX 40 CFR 82, Subparts A-E 40 CFR 82, Subparts G-H | |

B. Emission Units

The Operating Permit #OP0691-04 renewal application identified applicable and non-applicable requirements. After review of the application, the Department listed all non-applicable requirements in Section IV.A. These requirements relate to each specific unit, as well as facility wide.

SECTION V. GENERAL PERMIT CONDITIONS

A. Compliance Requirements

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(a)-(c)&(e), §1206(6)(c)&(b)

1. The permittee must comply with all conditions of the permit. Any noncompliance with the terms or conditions of the permit constitutes a violation of the Montana Clean Air Act, and may result in enforcement action, permit modification, revocation and reissuance, or termination, or denial of a permit renewal application under ARM Title 17, Chapter 8, Subchapter 12.
2. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
3. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. If appropriate, this factor may be considered as a mitigating factor in assessing a penalty for noncompliance with an applicable requirement if the source demonstrates that both the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations, and that such health, safety or environmental impacts were unforeseeable and could not have otherwise been avoided.
4. The permittee shall furnish to the Department, within a reasonable time set by the Department (not to be less than 15 days), any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Department copies of those records that are required to be kept pursuant to the terms of the permit. This subsection does not impair or otherwise limit the right of the permittee to assert the confidentiality of the information requested by the Department, as provided in 75-2-105, MCA.
5. Any schedule of compliance for applicable requirements with which the source is not in compliance with at the time of permit issuance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it was based.
6. For applicable requirements that will become effective during the permit term, the source shall meet such requirements on a timely basis unless a more detailed plan or schedule is required by the applicable requirement or the Department.

B. Certification Requirements

ARM 17.8, Subchapter 12, Operating Permit Program §1207 and §1213(7)(a)&(c)-(d)

1. Any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12, shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

2. Compliance certifications shall be submitted by February 15 of each year, or more frequently if otherwise specified in an applicable requirement or elsewhere in the permit. Each certification must include the required information for the previous calendar year (i.e., January 1 – December 31).
3. Compliance certifications shall include the following:
 - a. The identification of each term or condition of the permit that is the basis of the certification;
 - b. The identification of the method(s) or other means used by the owner or operator for determining the status of compliance with each term and condition during the certification period, consistent with ARM 17.8.1212;
 - c. The status of compliance with each term and condition for the period covered by the certification, *including whether compliance during the period was continuous or intermittent* (based on the method or means identified in ARM 17.8.1213(7)(c)(ii), as described above); and
 - d. Such other facts as the Department may require to determine the compliance status of the source.
4. All compliance certifications must be submitted to the Environmental Protection Agency, as well as to the Department, at the addresses listed in the Notification Addresses Appendix of this permit.

C. Permit Shield

ARM 17.8, Subchapter 12, Operating Permit Program §1214(1)-(4)

1. The applicable requirements and non-federally enforceable requirements are included and specifically identified in this permit and the permit includes a precise summary of the requirements not applicable to the source. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements and any non-federally enforceable requirements as of the date of permit issuance.
2. The permit shield described in 1 above shall remain in effect during the appeal of any permit action (renewal, revision, reopening, or revocation and reissuance) to the Board of Environmental Review (Board), until such time as the Board renders its final decision.
3. Nothing in this permit alters or affects the following:
 - a. The provisions of Sec. 7603 of the FCAA, including the authority of the administrator under that section;
 - b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
 - c. The applicable requirements of the Acid Rain Program, consistent with Sec. 7651g(a) of the FCAA;
 - d. The ability of the administrator to obtain information from a source pursuant to Sec. 7414 of the FCAA;

- e. The ability of the Department to obtain information from a source pursuant to the Montana Clean Air Act, Title 75, Chapter 2, MCA;
 - f. The emergency powers of the Department under the Montana Clean Air Act, Title 75, Chapter 2, MCA; and
 - g. The ability of the Department to establish or revise requirements for the use of Reasonably Available Control Technology (RACT) as defined in ARM Title 17, Chapter 8. However, if the inclusion of a RACT into the permit pursuant to ARM Title 17, Chapter 8, Subchapter 12, is appealed to the Board, the permit shield, as it applies to the source's existing permit, shall remain in effect until such time as the Board has rendered its final decision.
4. Nothing in this permit alters or affects the ability of the Department to take enforcement action for a violation of an applicable requirement or permit term demonstrated pursuant to ARM 17.8.106, Source Testing Protocol.
 5. Pursuant to ARM 17.8.132, for the purpose of submitting a compliance certification, nothing in these rules shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance. However, when compliance or noncompliance is demonstrated by a test or procedure provided by permit or other applicable requirements, the source shall then be presumed to be in compliance or noncompliance unless that presumption is overcome by other relevant credible evidence.
 6. The permit shield will not extend to minor permit modifications or changes not requiring a permit revision (see Sections I & J).
 7. The permit shield will extend to significant permit modifications and transfer or assignment of ownership (see Sections K & O).

D. Monitoring, Recordkeeping, and Reporting Requirements

ARM 17.8, Subchapter 12, Operating Permit Program §1212(2)&(3)

1. Unless otherwise provided in this permit, the permittee shall maintain compliance monitoring records that include the following information:
 - a. The date, place as defined in the permit, and time of sampling or measurement;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of such analyses; and
 - f. The operating conditions at the time of sampling or measurement.
2. The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. All monitoring data, support information, and required reports

and summaries may be maintained in 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 maintained in their original form at the plant site and shall be made available to Department personnel upon request.

3. The permittee shall submit to the Department, at the addresses located in the Notification Addresses Appendix of this permit, reports of any required monitoring by February 15 and August 15 of each year, or more frequently if otherwise specified in an applicable requirement or elsewhere in the permit. The monitoring report submitted on February 15 of each year must include the required monitoring information for the period of July 1 through December 31 of the previous year. The monitoring report submitted on August 15 of each year must include the required monitoring information for the period of January 1 through June 30 of the current year. All instances of deviations from the permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official, consistent with ARM 17.8.1207.

E. Prompt Deviation Reporting

ARM 17.8, Subchapter 12, Operating Permit Program §1212(3)(c)

The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. To be considered prompt, deviations shall be reported to the Department within the following timeframes (unless otherwise specified in an applicable requirement):

1. For deviations which may result in emissions potentially in violation of permit limitations:
 - a. An initial phone notification (or faxed or electronic notification) describing the incident within 24 hours (or the next business day) of discovery; and,
 - b. A follow-up written, faxed, or electronic report within 30 days of discovery of the deviation that describes the probable cause of the reported deviation and any corrective actions or preventative measures taken.
2. For deviations attributable to malfunctions, deviations shall be reported to the Department in accordance with the malfunction reporting requirements under ARM 17.8.110; and
3. For all other deviations, deviations shall be reported to the Department via a written, faxed, or electronic report within 90 days of discovery (as determined through routine internal review by the permittee).

Prompt deviation reports do not need to be resubmitted with regular semiannual (or other routine) reports, but may be referenced by the date of submittal.

F. Emergency Provisions

ARM 17.8, Subchapter 12, Operating Permit Program §1201(13) and §1214(5), (6)&(8)

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

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates through properly signed, contemporaneous logs, or other relevant evidence, that:
 - a. An emergency occurred and the permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in the permit; and
 - d. The permittee submitted notice of the emergency to the Department within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirements of ARM 17.8.1212(3)(c). This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
3. These emergency provisions are in addition to any emergency, malfunction or upset provision contained in any applicable requirement.

G. Inspection and Entry

ARM 17.8, Subchapter 12, Operating Permit Program §1213(3)&(4)

1. Upon presentation of credentials and other requirements as may be required by law, the permittee shall allow the Department, the administrator, or an authorized representative (including an authorized contractor acting as a representative of the Department or the administrator) to perform the following:
 - a. Enter the premises where a source required to obtain a permit is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
 - c. Inspect at reasonable times any facilities, emission units, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - d. As authorized by the Montana Clean Air Act and rules promulgated thereunder, sample or monitor, at reasonable times, any substances or parameters at any location for the purpose of assuring compliance with the permit or applicable requirements.
2. The permittee shall inform the inspector of all workplace safety rules or requirements at the time of inspection. This section shall not limit in any manner the Department's statutory right of entry and inspection as provided for in 75-2-403, MCA.

H. Fee Payment

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(f) and ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation, and Open Burning Fees §505(3)-(5) (STATE ONLY)

1. The permittee must pay application and operating fees, pursuant to ARM Title 17, Chapter 8, Subchapter 5.

2. Annually, the Department shall provide the permittee with written notice of the amount of the fee and the basis for the fee assessment. The air quality operation fee is due 30 days after receipt of the notice, unless the fee assessment is appealed pursuant to ARM 17.8.511. If any portion of the fee is not appealed, that portion of the fee that is not appealed is due 30 days after receipt of the notice. Any remaining fee, which may be due after the completion of an appeal, is due immediately upon issuance of the Board's decision or upon completion of any judicial review of the Board's decision.
3. If the permittee fails to pay the required fee (or any required portion of an appealed fee) within 90 days of the due date of the fee, the Department may impose an additional assessment of 15% of the fee (or any required portion of an appealed fee) or \$100, whichever is greater, plus interest on the fee (or any required portion of an appealed fee), computed at the interest rate established under 15-31-510(3), MCA.

I. Minor Permit Modifications

ARM 17.8, Subchapter 12, Operating Permit Program §1226(3)&(11)

1. An application for a minor permit modification need only address in detail those portions of the permit application that require revision, updating, supplementation, or deletion, and may reference any required information that has been previously submitted.
2. The permit shield under ARM 17.8.1214 will not extend to any minor modifications processed pursuant to ARM 17.8.1226.

J. Changes Not Requiring Permit Revision

ARM 17.8, Subchapter 12, Operating Permit Program §1224(1)-(3), (5)&(6)

1. The permittee is authorized to make changes within the facility as described below, provided the following conditions are met:
 - a. The proposed changes do not require the permittee to obtain a Montana Air Quality Permit under ARM Title 17, Chapter 8, Subchapter 7;
 - b. The proposed changes are not modifications under Title I of the FCAA, or as defined in ARM Title 17, Chapter 8, Subchapters 8, 9, or 10;
 - c. The emissions resulting from the proposed changes do not exceed the emissions allowable under this permit, whether expressed as a rate of emissions or in total emissions;
 - d. The proposed changes do not alter permit terms that are necessary to enforce applicable emission limitations on emission units covered by the permit; and
 - e. The facility provides the administrator and the Department with written notification at least 7 days prior to making the proposed changes.
2. The permittee and the Department shall attach each notice provided pursuant to 1.e above to their respective copies of this permit.
3. Pursuant to the conditions above, the permittee is authorized to make Section 502(b)(10) changes, as defined in ARM 17.8.1201(30), without a permit revision. For each such change, the written notification required under 1.e above shall include a description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

4. The permittee may make a change not specifically addressed or prohibited by the permit terms and conditions without requiring a permit revision, provided the following conditions are met:
 - a. Each proposed change does not weaken the enforceability of any existing permit conditions;
 - b. The Department has not objected to such change;
 - c. Each proposed change meets all applicable requirements and does not violate any existing permit term or condition; and
 - d. The permittee provides contemporaneous written notice to the Department and the administrator of each change that is above the level for insignificant emission units as defined in ARM 17.8.1201(22) and 17.8.1206(3), and the written notice describes each such change, including the date of the change, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
5. The permit shield authorized by ARM 17.8.1214 shall not apply to changes made pursuant to ARM 17.8.1224(3) and (5), but is applicable to terms and conditions that allow for increases and decreases in emissions pursuant to ARM 17.8.1224(4).

K. Significant Permit Modifications

ARM 17.8, Subchapter 12, Operating Permit Program §1227(1), (3)&(4)

1. The modification procedures set forth in 2 below must be used for any application requesting a significant modification of this permit. Significant modifications include the following:
 - a. Any permit modification that does not qualify as either a minor modification or as an administrative permit amendment;
 - b. Every significant change in existing permit monitoring terms or conditions;
 - c. Every relaxation of permit reporting or recordkeeping terms or conditions that limit the Department's ability to determine compliance with any applicable rule, consistent with the requirements of the rule; or
 - d. Any other change determined by the Department to be significant.
2. Significant modifications shall meet all requirements of ARM Title 17, Chapter 8, including those for applications, public participation, and review by affected states and the administrator, as they apply to permit issuance and renewal, except that an application for a significant permit modification need only address in detail those portions of the permit application that require revision, updating, supplementation or deletion.
3. The permit shield provided for in ARM 17.8.1214 shall extend to significant modifications.

L. Reopening for Cause

ARM 17.8, Subchapter 12, Operating Permit Program §1228(1)&(2)

This permit may be reopened and revised under the following circumstances:

1. Additional applicable requirements under the FCAA become applicable to the facility when the permit has a remaining term of 3 or more years. Reopening and revision of the permit shall be completed not later than 18 months after promulgation of the applicable requirement. No reopening is required under ARM 17.8.1228(1)(a) if the effective date of the applicable

requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms or conditions have been extended pursuant to ARM 17.8.1220(12) or 17.8.1221(2);

2. Additional requirements (including excess emission requirements) become applicable to an affected source under the Acid Rain Program. Upon approval by the administrator, excess emission offset plans shall be deemed incorporated into the permit;
3. The Department or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit; or
4. The administrator or the Department determines that the permit must be revised or revoked and reissued to ensure compliance with the applicable requirements.

M. Permit Expiration and Renewal

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(g), §1220(11)&(12), and §1205(2)(d)

1. This permit is issued for a fixed term of 5 years.
2. Renewal of this permit is subject to the same procedural requirements that apply to permit issuance, including those for application, content, public participation, and affected state and administrator review.
3. Expiration of this permit terminates the permittee's right to operate unless a timely and administratively complete renewal application has been submitted consistent with ARM 17.8.1221 and 17.8.1205(2)(d). If a timely and administratively complete application has been submitted, all terms and conditions of the permit, including the application shield, remain in effect after the permit expires until the permit renewal has been issued or denied.
4. For renewal, the permittee shall submit a complete air quality operating permit application to the Department not later than 6 months prior to the expiration of this permit, unless otherwise specified. If necessary to ensure that the terms of the existing permit will not lapse before renewal, the Department may specify, in writing to the permittee, a longer time period for submission of the renewal application. Such written notification must be provided at least 1 year before the renewal application due date established in the existing permit.

N. Severability Clause

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(i)&(l)

1. The administrative appeal or subsequent judicial review of the issuance by the Department of an initial permit under this subchapter shall not impair in any manner the underlying applicability of all applicable requirements, and such requirements continue to apply as if a final permit decision had not been reached by the Department.
2. If any provision of a permit is found to be invalid, all valid parts that are severable from the invalid part remain in effect. If a provision of a permit is invalid in one or more of its applications, the provision remains in effect in all valid applications that are severable from the invalid applications.

O. Transfer or Assignment of Ownership

ARM 17.8, Subchapter 12, Operating Permit Program §1225(2)&(4)

1. If an administrative permit amendment involves a change in ownership or operational control, the applicant must include in its request to the Department a written agreement containing a specific date for the transfer of permit responsibility, coverage and liability between the current and new permittee.
2. The permit shield provided for in ARM17.8.1214 shall not extend to administrative permit amendments.

P. Emissions Trading, Marketable Permits, Economic Incentives

ARM 17.8, Subchapter 12, Operating Permit Program §1226(2)

Notwithstanding ARM 17.8.1226(1) and (7), minor air quality operating permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in the Montana State Implementation Plan or in applicable requirements promulgated by the administrator.

Q. No Property Rights Conveyed

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(d)

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

R. Testing Requirements

ARM 17.8, Subchapter 1, General Provisions §105

The permittee shall comply with ARM 17.8.105.

S. Source Testing Protocol

ARM 17.8, Subchapter 1, General Provisions §106

The permittee shall comply with ARM 17.8.106.

T. Malfunctions

ARM 17.8, Subchapter 1, General Provisions §110

The permittee shall comply with ARM 17.8.110.

U. Circumvention

ARM 17.8, Subchapter 1, General Provisions §111

The permittee shall comply with ARM 17.8.111.

V. Motor Vehicles

ARM 17.8, Subchapter 3, Emission Standards §325

The permittee shall comply with ARM 17.8.325.

W. Annual Emissions Inventory

ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation and Open Burning Fees §505 (STATE ONLY)

The permittee shall supply the Department with annual production and other information for all emission units necessary to calculate actual or estimated actual amount of air pollutants emitted during each calendar year. Information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request, unless otherwise specified in this permit. Information shall be in the units required by the Department.

X. Open Burning

ARM 17.8, Subchapter 6, Open Burning §604, 605 and 606

The permittee shall comply with ARM 17.8.604, 605 and 606.

Y. Montana Air Quality Permits

ARM 17.8, Subchapter 7, Permit, Construction and Operation of Air Contaminant Sources §745 and 764 (ARM 17.8.745(1) and 764(1)(b) are STATE ENFORCEABLE ONLY until approval by the EPA as part of the SIP)

1. Except as specified, no person shall construct, install, modify or use any air contaminant source or stack associated with any source without first obtaining a permit from the Department or Board. A permit is not required for those sources or stacks as specified by ARM 17.8.744(1)(a)-(k).
2. The permittee shall comply with ARM 17.8.743, 744, 745, 748, and 764.
3. ARM 17.8.745(1) specifies de minimis changes as construction or changed conditions of operation at a facility holding a Montana Air Quality Permit (MAQP) issued under Chapter 8 that does not increase the facility's potential to emit by more than 15 tons per year of any pollutant, except (STATE ENFORCEABLE ONLY until approved by the EPA as part of the SIP):
 - a. Any construction or changed condition that would violate any condition in the facility's existing MAQP or any applicable rule contained in Chapter 8 is prohibited, except as provided in ARM 17.8.745(2);
 - b. Any construction or changed conditions of operation that would qualify as a major modification under Subchapters 8, 9 or 10 of Chapter 8;
 - c. Any construction or changed condition of operation that would affect the plume rise or dispersion characteristic of emissions that would cause or contribute to a violation of an ambient air quality standard or ambient air increment as defined in ARM 17.8.804;
 - d. Any construction or improvement project with a potential to emit more than 15 tons per year may not be artificially split into smaller projects to avoid Montana Air Quality Permitting; or
 - e. Emission reductions obtained through offsetting within a facility are not included when determining the potential emission increase from construction or changed conditions of operation, unless such reductions are made federally enforceable.

4. Any facility making a de minimis change pursuant to ARM 17.8.745(1) shall notify the Department if the change would include a change in control equipment, stack height, stack diameter, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1) (STATE ENFORCEABLE ONLY until approval by the EPA as part of the SIP).

Z. National Emission Standard for Asbestos

40 CFR, Part 61, Subpart M

The permittee shall not conduct any asbestos abatement activities except in accordance with 40 CFR 61, Subpart M (National Emission Standard for Hazardous Air Pollutants for Asbestos).

AA. Asbestos

ARM 17.74, Subchapter 3, General Provisions and Subchapter 4, Fees

The permittee shall comply with ARM 17.74.301, *et seq.*, and ARM 17.74.401, *et seq.* (State only)

BB. Stratospheric Ozone Protection – Servicing of Motor Vehicle Air Conditioners

40 CFR, Part 82, Subpart B

If the permittee performs a service on motor vehicles and this service involves ozone-depleting substance/refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR 82, Subpart B.

CC. Stratospheric Ozone Protection – Recycling and Emission Reductions

40 CFR, Part 82, Subpart F

The permittee shall comply with the standards for recycling and emission reductions in 40 CFR 82, Subpart F, except as provided for MVACs in Subpart B:

1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156;
2. Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158;
3. Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technical certification program pursuant to §82.161;
4. Persons disposing of small appliances, MVACs and MVAC-like (as defined at §82.152) appliances must comply with recordkeeping requirements pursuant to §82.166;
5. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156; and
6. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

DD. Emergency Episode Plan

The permittee shall comply with the requirements contained in Chapter 9.7 of the State of Montana Air Quality Control Implementation Plan.

Each major source emitting 100 tons per year located in a Priority I Air Quality Control Region, shall submit to the Department a legally enforceable Emergency Episode Action Plan (EEAP) that details how the source will curtail emissions during an air pollutant emergency episode. The industrial EEAP shall be in accordance with the Department's EEAP and shall be submitted according to a timetable developed by the Department, following Priority I reclassification.

EE. Definitions

Terms not otherwise defined in this permit or in the Definitions and Abbreviations Appendix of this permit, shall have the meaning assigned to them in the referenced regulations.

APPENDICES

Appendix A INSIGNIFICANT EMISSION UNITS

Disclaimer: The information in this appendix is not State or Federally enforceable, but is presented to assist MDU, the permitting authority, inspectors, and the public.

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

List of Insignificant Activities:

The following table of insignificant sources and/or activities was provided by MDU. Because there are no requirements to update such a list, the emission units and/or activities may change from those specified in the table.

| Emissions Unit ID | Description |
|-------------------|---------------------------------------|
| IEU02 | Heating Boiler |
| IEU03 | Diesel Fire Pump Engine |
| IEU04 | Emergency Generator |
| IEU05 | Miscellaneous Space Heaters |
| IEU09 | Coal Tripper House |
| IEU10 | Lime Storage Silo |
| IEU11 | Plant Roads |
| IEU12 | Vehicle Air Conditioning |
| IEU13 | Activated Carbon Injection Silo |
| IEU14 | Coal Conveyor Dust Collection Devices |

Appendix B DEFINITIONS and ABBREVIATIONS

"Act" means the Clean Air Act, as amended, 42 U.S. 7401, *et seq.*

"Administrative permit amendment" means an air quality operating permit revision that:

- (a) corrects typographical errors;
- (b) identifies a change in the name, address or phone number of any person identified in the air quality operating permit, or identifies a similar minor administrative change at the source;
- (c) requires more frequent monitoring or reporting by MDU;
- (d) requires changes in monitoring or reporting requirements that the Department deems to be no less stringent than current monitoring or reporting requirements;
- (e) allows for a change in ownership or operational control of a source if the Department has determined that no other change in the air quality operating permit is necessary, consistent with ARM 17.8.1225; or
- (f) incorporates any other type of change which the Department has determined to be similar to those revisions set forth in (a)-(e), above.

"Applicable requirement" means all of the following as they apply to emission units in a source requiring an air quality operating permit (including requirements that have been promulgated or approved by the Department or the administrator through rule making at the time of issuance of the air quality operating permit, but have future-effective compliance dates, provided that such requirements apply to sources covered under the operating permit):

- (a) any standard, rule, or other requirement, including any requirement contained in a consent decree or judicial or administrative order entered into or issued by the Department, that is contained in the Montana state implementation plan approved or promulgated by the administrator through rule making under Title I of the FCAA;
- (b) any federally enforceable term, condition or other requirement of any Montana Air Quality Permit issued by the Department under Subchapters 7, 8, 9 and 10 of this chapter, or pursuant to regulations approved or promulgated through rule making under Title I of the FCAA, including parts C and D;
- (c) any standard or other requirement under Section 7411 of the FCAA, including Section 7411(d);
- (d) any standard or other requirement under Section 7412 of the FCAA, including any requirement concerning accident prevention under Section 7412(r)(7), but excluding the contents of any risk management plan required under Section 7412(r);
- (e) any standard or other requirement of the acid rain program under Title IV of the FCAA or regulations promulgated thereunder;
- (f) any requirements established pursuant to Section 7661c(b) or Section 7414(a)(3) of the FCAA;

- (g) any standard or other requirement governing solid waste incineration, under Section 7429 of the FCAA;
- (h) any standard or other requirement for consumer and commercial products, under Section 7511b(e) of the FCAA;
- (i) any standard or other requirement for tank vessels, under Section 7511b(f) of the FCAA;
- (j) any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the FCAA, unless the administrator determines that such requirements need not be contained in an air quality operating permit;
- (k) any national ambient air quality standard or increment or visibility requirement under part C of Title I of the FCAA, but only as it would apply to temporary sources permitted pursuant to Section 7661c(e) of the FCAA; or
- (l) any federally enforceable term or condition of any air quality open burning permit issued by the Department under Subchapter 6.

"Department" means the Montana Department of Environmental Quality.

"Emissions unit" means any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant or any pollutant listed under Section 7412(b) of the FCAA. This term is not meant to alter or affect the definition of the term "unit" for purposes of Title IV of the FCAA.

"FCAA" means the Federal Clean Air Act, as amended.

"Federally enforceable" means all limitations and conditions which are enforceable by the administrator, including those requirements developed pursuant to 40 CFR Parts 60 and 61, requirements within the Montana state implementation plan, and any permit requirement established pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51, Subpart I, including operating permits issued under an EPA approved program that is incorporated into the Montana state implementation plan and expressly requires adherence to any permit issued under such program.

"Fugitive emissions" means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

"General air quality operating permit" or **"general permit"** means an air quality operating permit that meets the requirements of ARM 17.8.1222, covers multiple sources in a source category, and is issued in lieu of individual permits being issued to each source.

"Hazardous air pollutant" means any air pollutant listed as a hazardous air pollutant pursuant to Section 112(b) of the FCAA.

"Non-federally enforceable requirement" means the following as they apply to emission units in a source requiring an air quality operating permit:

- (a) any standard, rule, or other requirement, including any requirement contained in a consent decree, or judicial or administrative order entered into or issued by the Department, that is not contained in the Montana state implementation plan approved or promulgated by the administrator through rule making under Title I of the FCAA;

- (b) any term, condition or other requirement contained in any Montana Air Quality Permit issued by the Department under Subchapters 7, 8, 9 and 10 of this chapter that is not federally enforceable;
- (c) does not include any Montana ambient air quality standard contained in Subchapter 2 of this chapter.

"Permittee" means the owner or operator of any source subject to the permitting requirements of this subchapter, as provided in ARM 17.8.1204, that holds a valid air quality operating permit or has submitted a timely and complete permit application for issuance, renewal, amendment, or modification pursuant to this subchapter.

"Regulated air pollutant" means the following:

- (a) nitrogen oxides or any volatile organic compounds;
- (b) any pollutant for which a national ambient air quality standard has been promulgated;
- (c) any pollutant that is subject to any standard promulgated under Section 7411 of the FCAA;
- (d) any Class I or II substance subject to a standard promulgated under or established by Title VI of the FCAA; or
- (e) any pollutant subject to a standard or other requirement established or promulgated under Section 7412 of the FCAA, including but not limited to the following:
 - (i) any pollutant subject to requirements under Section 7412(j) of the FCAA. If the administrator fails to promulgate a standard by the date established in Section 7412(e) of the FCAA, any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established in Section 7412(e) of the FCAA;
 - (ii) any pollutant for which the requirements of Section 7412(g)(2) of the FCAA have been met but only with respect to the individual source subject to Section 7412(g)(2) requirement.

"Responsible official" means one of the following:

- (a) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 - (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or
 - (ii) the delegation of authority to such representative is approved in advance by the Department.

- (b) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.
- (c) For a municipality, state, federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a regional administrator of the environmental protection agency).
- (d) For affected sources: the designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the FCAA or the regulations promulgated thereunder are concerned, and the designated representative for any other purposes under this subchapter.

Abbreviations:

| | |
|-----------------|---|
| ARM | Administrative Rules of Montana |
| ASTM | American Society of Testing Materials |
| BACT | Best Available Control Technology |
| BDT | bone dry tons |
| BTU | British Thermal Unit |
| CFR | Code of Federal Regulations |
| CO | carbon monoxide |
| DEQ | Department of Environmental Quality |
| dscf | dry standard cubic foot |
| dscfm | dry standard cubic foot per minute |
| EEAP | Emergency Episode Action Plan |
| EPA | U.S. Environmental Protection Agency |
| EPA Method | Test methods contained in 40 CFR 60, Appendix A |
| EU | emissions unit |
| FCAA | Federal Clean Air Act |
| gr | grains |
| HAP | hazardous air pollutant |
| IEU | insignificant emissions unit |
| Mbdft | thousand board feet |
| Method 5 | 40 CFR 60, Appendix A, Method 5 |
| Method 9 | 40 CFR 60, Appendix A, Method 9 |
| MMbdft | million board feet |
| MMBTU | million British Thermal Units |
| NO _x | oxides of nitrogen |
| NO ₂ | nitrogen dioxide |
| O ₂ | oxygen |
| Pb | lead |
| PM | particulate matter |
| PM10 | particulate matter less than 10 microns in size |
| psi | pounds per square inch |
| scf | standard cubic feet |
| SIC | Source Industrial Classification |
| SO ₂ | sulfur dioxide |
| SO _x | oxides of sulfur |
| tpy | tons per year |
| U.S.C. | United States Code |
| VE | visible emissions |
| VOC | volatile organic compound |

Appendix C NOTIFICATION ADDRESSES

Compliance Notifications:

Montana Department of Environmental Quality
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901
Helena, MT 59620-0901

United States EPA
Air Program Coordinator
Region VIII, Montana Office
10 W. 15th Street, Suite 3200
Helena, MT 59626

Permit Modifications:

Montana Department of Environmental Quality
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901
Helena, MT 59620-0901

Office of Partnerships and Regulatory Assistance
Air and Radiation Program
US EPA Region VIII 8P-AR
1595 Wynkoop Street
Denver, CO 80202-1129

Appendix D AIR QUALITY INSPECTOR INFORMATION

Disclaimer: The information in this appendix is not State or Federally enforceable but is presented to assist MDU, permitting authority, inspectors, and the public.

1. Direction to Plant:

The facility is located 1.5 miles south of Sidney, Montana and is accessed by traveling South on Highway 16 from Sidney and turning east onto Highway 23. Highway 23 borders the facility boundary.

2. Safety Equipment Required:

All visitors are required to check in when arriving on site. Hard hats and safety glasses are required at all times except in office areas or the CEMS shelter. All visitors are required to be accompanied by plant personnel. In situations such as during RATA testing, it is permissible for visitors to go unattended between the office area and the CEMS shelter as needed. Hard hats and safety glasses are available if needed.

3. Facility Plot Plan:

The facility plot plan was submitted with the initial operating permit application on June 10, 1996, and is available for review at the Department offices in Helena.

Appendix E PREDICTIVE OPACITY

Nothing in this appendix is intended to alter the requirements in the Acid Rain Appendix.

1. Pursuant to 40 CFR 51, Appendix P, § 3.9, MDU shall maintain and operate a continuous predictive opacity monitoring system as approved by the Department. The predictive monitoring system shall be used to demonstrate compliance with the applicable 6-minute opacity limit.

The predictive opacity monitoring system shall include, at a minimum, instrumentation on the following parameters:

- a. 4 Scrubber Throat Nozzle Flows
- b. Scrubber Slurry Flow to Disk
- c. Disk Position
- d. Scrubber Differential Pressure
- e. Recycling Slurry pH
- f. Recycling Slurry Density (Specific Gravity)
- g. Mist Eliminator Sump Level
- h. Steam Flow
- i. Dust Collector Differential Pressure
- j. Flue Gas Temperature (air heater outlet)
- k. Flue Gas Oxygen (at air heater outlet)
- l. Dust Collector Compartments in Service

The parameters monitored must be used to predict the scrubber disk position and the opacity readings.

2. MDU shall maintain the equation for calculating opacity on a six minute average. Any changes to the predictive opacity equation must be submitted to the Department for approval. MDU shall also submit data as necessary to support the change requested.
3. MDU shall maintain the scrubber disk position calculations. Any changes to the disk position calculations must be submitted to the Department. MDU shall also submit data necessary to support the change requested.
4. MDU shall maintain records for a minimum of 5 years of the log sheets, computerized data, analysis, and calculations used to prepare the required reports.
5. MDU shall submit reports to the Department containing all 6-minute averages equal to or greater than the applicable opacity limit. The summary reports shall be submitted quarterly to the Department.

The quarterly reports must be postmarked by the 30th day after the end of each quarter.

Appendix F SO₂ CEMS

Nothing in this appendix is intended to alter the requirements in the Acid Rain Appendix.

1. Pursuant to 40 CFR Part 75, MDU shall calibrate, maintain, and operate continuous monitoring systems. Heat input shall be determined as required in the 40 CFR 75, Appendix F and the NO_x CEMS Appendix.

Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required pursuant to 40 CFR Part 75, all continuous monitoring systems shall be in continuous operation.

2. The monitor range is set at 0 ppm to 500 ppm. The monitor must have an over-range alarm. MDU shall report any exceedances of the range to the Department. An exceedance of the range is a violation of the 2 lb of SO₂/mmBtu emission limit.
3. MDU shall maintain records for a minimum of 5 years of the log sheets, computerized data, analysis, and calculations used to prepare the required reports.
4. MDU shall submit quarterly to the Department containing the following information:
 - a. MDU shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which the continuous monitoring system is inoperative.
 - b. MDU shall submit an excess emissions and monitoring systems performance report and/or a summary report form (see paragraph (c) below) to the Department. Written reports of excess emissions greater than 2 lbs of SO₂/mmBtu shall include the following information:
 - i. The magnitude of excess emissions, any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
 - ii. Any period of time when the monitor range is exceeded. This shall include the date and time of commencement and completion of each time period the monitor is exceeding the range. The process operating time during the reporting period. These periods shall be considered periods of excess emissions.
 - iii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
 - iv. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - v. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

- c. The summary report form shall contain the information and be in the format shown in Figure 1.
 - 1. The summary report form shall be submitted:
 - i. If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CEMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in section (b) above need not be submitted unless requested.
 - ii. If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CEMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in section (b) above shall both be submitted.

**Figure 1 – Summary Report
Gaseous Excess Emission and Monitoring System Performance**

| |
|---|
| <p>Pollutant: Reporting period dates: From _____ to _____ Emission Limitation: : Monitor Manufacturer and Model No.: Date of Latest CEMS Certification or Audit: Process Unit(s) Description: Total source operating time in reporting period:</p> <p>Emission Data Summary</p> <ol style="list-style-type: none"> 1. Duration of excess emission in reporting period due to: <ol style="list-style-type: none"> a. Startup/shutdown b. Control equipment problems c. Process problems d. Other known causes e. Unknown causes 2. Total duration of excess emissions. 3. $\frac{\text{Total duration of excess emission} \times (100)}{\text{Total Boiler Operating Time}} = \% \text{ excess emissions}$ <p>CEMS Performance Summary</p> <ol style="list-style-type: none"> 1. CEMS downtime in reporting period due to: <ol style="list-style-type: none"> a. Monitor equipment malfunctions b. Non-Monitor equipment malfunctions c. Quality assurance calibrations d. Other known causes e. Unknown causes 2. Total CEMS Downtime when the boiler is operating (nearest quarter hour). 3. $\frac{\text{Total CEMS downtime when the boiler is operating} \times 100}{\text{Total boiler operating time}} = \% \text{ downtime}$ 4. Total boiler operating time (nearest quarter hour). |
|---|

5. MDU shall submit quarterly reports to the Department containing the following information for each month of the quarter:
 - a. Tons of emissions calculated as the sum of $E_h = K \times C_h \times Q_h$ where E_h = emission rate (lb/hr), $K = 1.66 \times 10^{-7}$ (lb/scf)/ppm (SO₂), C_h = Measured Pollutant Concentration (ppm_{wet}), and Q_h = Measured Stack Gas Flow Rate (SCFH_{wet}); and
 - b. A summary report including the information identified in 40 CFR § 75.64 (a)(3) in writing which includes: Tons (rounded to the nearest tenth) of SO₂ emitted during the quarter and cumulative SO₂ emissions for calendar year.

The quarterly reports must be postmarked by the 30th day after the end of the calendar quarter.

6. MDU shall submit copies of all RATAs performed to the Department in accordance with ARM 17.8.106, Source Test Protocol and Procedures Manual.
7. MDU shall submit copies of each monitoring plan revision which results in the need to recertify the CEMS.

Appendix G NO_x CEMS

Nothing in this appendix is intended to alter the requirements in the Acid Rain Appendix.

1. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required pursuant to 40 CFR Part 75, all continuous monitoring systems shall be in continuous operation.
2. MDU shall conduct a “Standard Practice for Ultimate Analysis of Coal and Coke”, ASTM D5291-92, at a minimum of once per year for each type of coal used.
3. MDU shall determine the gross calorific value (GVC) of the fuels using ASTM D2015-91, “Standard Test Method for Gross Calorific Value of Coal and Coke by the Adiabatic Bomb Calorimeter” or other method as identified in 40 CFR Part 75, Appendix F, §3.3.6.2, at a minimum of once per year for each type of coal used.
4. MDU shall conduct a weekly fuel analysis using ASTM D4239-85 or other method approved by the Department.
5. MDU shall maintain records for a minimum of 5 years of the log sheets, computerized data, analysis, and calculations used to prepare the required reports.
6. MDU shall submit quarterly to the Department containing the following information:
 - a. MDU shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which the continuous monitoring system is inoperative.
 - b. MDU shall submit a monitoring systems performance report to the Department in the format shown in Figure 1.

**Figure 1 – Summary Report
Gaseous Excess Emission and Monitoring System Performance**

Pollutant:
 Reporting period dates: From _____ to _____
 Emission Limitation: :
 Monitor Manufacturer and Model No.:
 Date of Latest CEMS Certification or Audit:
 Process Unit(s) Description:
 Total source operating time in reporting period:

CEMS Performance Summary

1. CEMS downtime in reporting period due to:
 - a. Monitor equipment malfunctions
 - b. Non-Monitor equipment malfunctions
 - c. Quality assurance calibrations
 - d. Other known causes
 - e. Unknown causes
2. Total CEMS Downtime when the boiler is operating (nearest quarter hour).
3. $\frac{\text{Total CEMS downtime when the boiler is operating} \times 100}{\text{Total boiler operating time}} = \% \text{ downtime}$
4. Total boiler operating time (nearest quarter hour).

7. MDU shall submit quarterly reports to the Department containing the following information for each month of the quarter:
 - a. Monthly average coal analysis;
 - b. Coal consumption;
 - c. Other fuels combusted and the amount;
 - d. Tons of emissions calculated as the sum of $E_h = K \times C_h \times Q_h$ where E_h = emission rate (lb/hr), $K = 1.19 \times 10^{-7}$ (lb/scf)/ppm (NO_x), C_h = Measured Pollutant Concentration (ppm_{wet}), and Q_h where E_h = Measured Stack Gas Flow Rate (SCFH_{wet}); and
 - e. A summary report including the information identified in 40 CFR §75.64 (a)(4) through (6) in writing which includes:
 - i. Average NO_x emission rate (lb/mmBtu, rounded to the nearest hundredth) during the quarter and cumulative NO_x emission rate for calendar year.
 - ii. Tons of CO_2 emitted during quarter and cumulative CO_2 for calendar year.
 - iii. Total heat input (mmBtu) for quarter and cumulative heat input for calendar year.

The quarterly reports must be postmarked by the 30th day after the end of the calendar quarter.

8. MDU shall submit copies of all RATAs performed to the Department in accordance with ARM 17.8.106, Source Test Protocol and Procedures.
9. MDU shall submit copies of each monitoring plan revision which results in the need to recertify the CEMS.

Appendix H ACID RAIN

Appendix I Compliance Assurance Monitoring (CAM) Plan

| Table – 1 MONITORING APPROACH | | | | | | | | |
|--------------------------------------|---|---|---|---|--|---|---|---|
| | Indicator #1 | Indicator #2 | Indicator #3 | Indicator #4 | Indicator #5 | Indicator #6 | Indicator #7 | Indicator #8 |
| Indicator | Scrubber Slurry Flow | Flooded Disk Position | Differential Pressure | Dust Collector Flow | Flue Gas Temperature | Flue Gas O ₂ | Dust Collector Compartments in Service | Disk Deviation |
| Range | 1500 to 4000 gpm | 0 to 18 in. | 10 to 14 IWC | 50000 to 300000 scfm | 200 to 420 ° F | 2 to 7 % | 2 to 4 Compartments | Disk position deviation from |
| Data Collection Method | Flow meters located after Pump Discharge at disk inlet and disk | Transmitter located at disk shaft | Differential pressure monitor, sensors located above and below disk | Calculated from Dust Collector differential pressure, temperature corrected | Duct Temperature probe in gas duct at Dust Collector | O ₂ Monitor located after economizer before the air heater | Limit switch on control dampers | Calculated from indicators one through seven |
| QA/QC Practices | Periodic Inspections | Inspected and Calibrated at 6-month outages | Calibrated every 6-months , pressure taps cleaned weekly | Cleaned every 6-months, calibrated yearly | Inspect during one outage per year and clean well as necessary | Calibrated Monthly | Corrective action taken if false indication is observed | Comparison reviewed after cleaning of disk |
| Monitoring Frequency | Measured Continuously | Measured Continuously | Measured Continuously | Measured Continuously | Measured Continuously | Measured Continuously | Measured Continuously | Measured continuously |
| Data Collection Frequency | Instantaneous data compiled into 6-minute average | Instantaneous data compiled into 6-minute average | Instantaneous data compiled into 6-minute average | Instantaneous data compiled into 6-minute average | Instantaneous data compiled into 6-minute average | Instantaneous data compiled into 6-minute average | Instantaneous data compiled into 6-minute average | Instantaneous data compiled into 6-minute average |
| Averaging period | Instantaneous data used | Instantaneous data used | Instantaneous data used | Instantaneous data used for calculations | Instantaneous data used for calculations | Instantaneous data used for calculations | Instantaneous data used for calculations | Daily average calculated from 6-minute averages |

Although the complete hard copy of Appendix I is not included in the permit, the contents of Appendix I, MDU's CAM plan remain as applicable requirements as stated in the Title V Operating Permit. To receive a hard copy of this appendix, please contact one of the following:

The Department of Environmental Quality
Permitting and Compliance Division
Air Resources Management Bureau
1520 E. Sixth Ave.
P.O. Box 200901
Helena, Montana 59620-0901
Bureau Phone (406) 444-3490

OR

Montana Dakota Utilities Co.
Lewis & Clark Station
400 North Fourth Street
Bismarck, North Dakota 58501
Phone (701) 222-7844

Appendix J MEMS

MEMS

- a. MDU shall install, calibrate, certify, maintain, and operate a MEMS to monitor and record the rate of mercury emissions discharged into the atmosphere from all mercury emitting generating units (units) as defined in the Administrative Rules of Montana 17.8.740.
 - (1) The MEMS shall be comprised of equipment as required in 40 CFR 75.81(a) and defined in 40 CFR 72.2.
 - (2) The MEMS shall conform to all applicable requirements of 40 CFR Part 75.
 - (3) The MEMS data will be used to demonstrate compliance with the emission limitations contained in Section II.A.4.

- b. MDU shall prepare, maintain and submit a written MEMS Monitoring Plan to the Department.
 - (1) The monitoring plan shall contain sufficient information on the MEMS and the use of data derived from these systems to demonstrate that all the gaseous mercury stack emissions from each unit are monitored and reported.
 - (2) Whenever MDU makes a replacement, modification, or change in a MEMS or alternative monitoring system under 40 CFR 75 subpart E, including a change in the automated data acquisition and handling system (DAHS) or in the flue gas handling system, that affects information reported in the monitoring plan (e.g. a change to a serial number for a component of a monitoring system), then the owner or operator shall update the monitoring plan.
 - (3) If any monitoring plan information requires an update pursuant to Section b.(2), submission of the written monitoring plan update shall be completed prior to or concurrent with the submittal of the quarterly report required in c. below for the quarter in which the update is required.
 - (4) The initial submission of the Monitoring Plan to the Department shall include a copy of a written Quality Assurance/Quality Control (QA/QC) Plan as detailed in 40 CFR 75 Appendix B, Section 1. Subsequently, the QA/QC Plan need only be submitted to the Department when it is substantially revised. Substantial revisions can include items such as changes in QA/QC processes resulting from rule changes, modifications in the frequency or timing of QA/QC procedures, or the addition/deletion of equipment or procedures.
 - (5) The Monitoring Plan shall include, at a minimum, the following information:
 - (a) Facility summary including:
 - (i) A description of each mercury emitting generating unit at the facility.

- (ii) Maximum and average loads (in megawatts (MW)) with fuels combusted and fuel flow rates at the maximum and average loads for each unit.
 - (iii) A description of each unit's air pollution control equipment and a description of the physical characteristics of each unit's stack.
 - (b) Mercury emission control summary including a description of control strategies, equipment, and design process rates.
 - (c) MEMS description, including:
 - (i) Identification and description of each monitoring component in the MEMS including manufacturer and model identifications; monitoring method descriptions; and normal operating scale and units descriptions. Descriptions of stack flow, diluent gas, and moisture monitors (if used) in the system must be described in addition to the mercury monitor or monitors.
 - (ii) A description of the normal operating process for each monitor including a description of all QA/QC checks
 - (iii) A description of the methods that will be employed to verify and maintain the accuracy and precision of the MEMS calibration equipment.
 - (iv) Identification and description of the DAHS, including major hardware and software components, conversion formulas, constants, factors, averaging processes, and missing data substitution procedures.
 - (v) A description of all initial certification and ongoing recertification tests and frequencies; as well as all accuracy auditing tests and frequencies.
 - (d) The Maximum Potential Concentration (MPC), Maximum Expected Concentration (MEC), span value, and range value as applicable and as defined in 40 CFR 75 Appendix A, 2.1.7.
 - (e) Examples of all data reports required in c. below.
- c. MDU shall submit written, Quarterly Mercury Monitoring Reports. The reports shall be postmarked to the Department by the 30th day after the end of each quarter and shall include, at a minimum, the following:
 - (1) Mercury emissions. The reports shall include:
 - (a) The 12-month rolling average pounds per trillion British thermal units (lb/TBtu) emission rate for each month of the reporting quarter. The rolling 12-month basis is an average of the last 12 individual calendar monthly averages, with each monthly average calculated at the end of each calendar month;

- (b) The monthly average lb/TBtu mercury emission rate for each month of the quarter;
 - (c) The total heat input to the boiler (in TBtu) for each 12-month rolling period of the quarter; and
- (2) Mercury excess emissions. The report shall describe the magnitude of excess mercury emissions experienced during the quarter, including:
- (a) The date and time of commencement and completion of each period of excess emissions. Periods of excess emissions shall be defined as those emissions calculated on a rolling 12-month basis which are greater than the limitation established in II.A.4.
 - (b) The nature and cause of each period of excess emissions and the corrective action taken or preventative measures adopted in response.
 - (c) If no periods of excess mercury emissions were experienced during the quarter, the report shall state that information.
- (3) MEMS performance. The report shall describe:
- (a) The number of operating hours that the MEMS was unavailable or not operating within quality assurance limits (monitor downtime) during the reporting quarter, broken down by the following categories:
 - Monitor equipment malfunctions;
 - Non-Monitor equipment malfunctions;
 - Quality assurance calibration;
 - Other known causes; and
 - Unknown causes.
 - (b) The percentage of unit operating time that the MEMS was unavailable or not operating within quality assurance limits (monitor downtime) during the reporting quarter. The percentage of monitor downtime in each calendar quarter shall be calculated according to the following formula:

$$MEMSDowntime\% = \left(\frac{MEMSDownHours}{OpHours} \right) \times 100 \text{ where}$$

MEMSDowntime% = Percentage of unit operating hours classified as MEMS monitor downtime during the reporting quarter

MEMSDownHours = Total number of hours of MEMS monitor downtime during the reporting quarter

OpHours = Total number of hours the unit operated during the reporting quarter.

- (c) For any reporting quarter in which monitor downtime exceeds 10%, a description of each time period during which the MEMS was inoperative or operating in a manner defined in 40 CFR Part 75 as “out of control.” Each description must include the date, start and end times, total downtime (in hours), the reason for the system downtime, and any necessary corrective actions that were taken. In addition, the report shall describe the values used for any periods when missing data substitution was necessary as detailed in 40 CFR 75.30, *et seq.*
 - (4) The quarterly report shall include the results of any QA/QC audits, checks, or tests conducted to satisfy the requirements of 40 CFR Part 75 Appendices A, B or K.
 - (5) Compliance certification. Each quarterly report shall contain a certification statement signed by the facility’s responsible official based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The certification shall indicate:
 - (a) Whether the monitoring data submitted were recorded in accordance with the applicable requirements of 40 CFR Part 75 including the QA/QC procedures and specifications of that part and its appendices, and any such requirements, procedures and specifications of an applicable excepted or approved alternative monitoring method as represented in the approved Monitoring Plan.
 - (b) That for all hours where data are substituted in accordance with 40 CFR 75.38, the add-on mercury emission controls were operating within the range of parameters listed in the quality-assurance plan for the unit, and that the substitute values do not systematically underestimate mercury emissions.
 - (6) The format of each component of the quarterly report may be negotiated with the Department’s representative to accommodate the capabilities and formats of the facility’s DAHS.
 - (7) Each quarterly report must be received by the Department within 30 days following the end of each calendar reporting period (January-March, April-June, July-September, and October-December).
 - (8) The electronic data reporting detailed in 40 CFR Part 75 shall not be required unless Montana is able to receive and process data in an electronic format.
- d. MDU shall maintain a file of all measurements and performance testing results from the MEMS; all MEMS performance evaluations; all MEMS or monitoring device calibration checks and audits; and records of all adjustments and maintenance performed on these systems or devices recorded in a permanent form suitable for inspection. The file shall be retained on site for at least five years following the date of such measurements and reports. MDU shall make these records available for inspection by the Department and shall supply these records to the Department upon request.