



November 7, 2016

Colonel Ronald G. Allen, Jr.
Commander, 341st Missile Wing
21 77th Street North, Suite 144
Malmstrom Air Force Base, MT 59402-7538

RE: Final Title V Operating Permit #OP1427-11

Dear Colonel Allen:

The Department of Environmental Quality has prepared the enclosed Final Operating Permit #OP1427-11, for Malmstrom Air Force base, located in Great Falls, Montana. Please review the cover page of the attached permit for information pertaining to the action taking place on Permit #OP1427-11.

If you have any questions, please contact Craig Henrikson, the permit writer, at (406) 444-6711 or by email at chenrikson@mt.gov.

Sincerely,

A handwritten signature in black ink that reads "Julie A. Merkel".

Julie Merkel
Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-3626

A handwritten signature in black ink that reads "Craig Henrikson".

Craig Henrikson, P.E.
Environmental Engineer
Air Quality Bureau
(406) 444-6711

JM: CH
Enclosure
cc: Robert Duraski, US EPA Region VIII, 8P-AR

STATE OF MONTANA
Department of Environmental Quality
Helena, Montana 59620



AIR QUALITY OPERATING PERMIT OP1427-11

Issued to: United States Department of the Air Force
Malmstrom Air Force Base, Montana
Section 2, Township 20 North, Range 4 East, Cascade County, MT
341 CES/CEV
39-78th Street North
Great Falls, MT 59402-7536

Final Date: **November 5, 2016**
Expiration Date: **June 4, 2017**
Renewal Application Due: **December 4, 2016**

Effective Date: **November 5, 2016**
Date of Decision: **October 5, 2016**

Administrative Amendment Application Received: **August 23, 2016**
Application Deemed Administratively Complete: **August 23, 2016**
Application Deemed Technically Complete: **August 23, 2016**
AFS Number: 030-013-0016A

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 November 5, 2016. This 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 - B 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: Department of the Air Force, Malmstrom Air Force Base, Montana

Mailing Address: 341 CES/CEVC, 39 – 78th Street North

City: Great Falls

State: Montana

Zip Code: 59402-7536

Plant Location: Section 2, Township 20 North, Range 4 East, Cascade County, MT

Responsible Official: Ronald G. Allen, Jr., Colonel USAF

Telephone: (406) 731-3411

Email: Ronald.Allen.1@us.af.mil

Facility Contact Person: Robert Richards

Telephone: (406) 731-7148

Email: robert.richards.12@us.af.mil

Primary SIC Code: 9711

Nature of Business: National Security

Description of Process:

The air force base was established in 1942. The facility currently houses the 341st Missile Wing. The base itself contains the facilities necessary for all its military and non-military personnel, which currently number between 4,000 and 5,000. The greatest stationary source of air contaminants at Malmstrom are the three heating plant boilers, although several other miscellaneous smaller sources of emissions are also present at the base.

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
EU001	Heating Plant Boiler #1, Coal / Natural Gas (Maximum Capacity 106.25 MMBtu/hr)	Dry Lime Scrubber and Fabric Filter Baghouse
EU002	Heating Plant Boiler #2, Natural Gas Only (Maximum Capacity 35 MMBtu/hr)	Natural Gas Combustion Only
EU003	Heating Plant Boiler #3, Coal / Natural Gas (Maximum Capacity 106.25 MMBtu/hr)	Dry Lime Scrubber and Fabric Filter Baghouse
EU004	Auxiliary Power Generator (diesel) Building.82110	Limited Operation
EU005	Coal Yard Handling System	Fabric Filter Baghouse
EU006	Landfill #1	NA
EU007	Landfill #2	NA
EU008	JP-8 Fuel Storage Tanks (H-1 and H-2)	Floating Internal Roof
EU009	Building 780 Emergency/Back-Up Diesel Generator	Limited Operation
EU010	Building 500 Emergency/Back-Up Diesel Generator	NA

SECTION III. PERMIT CONDITIONS

The following requirements and conditions are applicable to the facility or to specific emission 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 17.8.749 and 40 CFR 60, Subpart Ce	Medical Waste/Infectious Waste	Reasonable Precautions	-----
A.15	ARM 17.8.342	NESHAPs General Provisions	SSM Plans	Submittal
A.16	ARM 17.8.1211(1)(c) and 40 CFR Part 98	Greenhouse Gas Reporting	Reporting	-----
A.17	ARM 17.8.1212	Reporting Requirements	Compliance Monitoring	-----
A.18	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 test, 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), Malmstrom 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), Malmstrom 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), Malmstrom 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), Malmstrom 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, Malmstrom 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, Malmstrom 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 lb/MMBtu.

- A.8. Pursuant to ARM 17.8.310, unless otherwise specified by rule or in this permit, Malmstrom 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:

For process weight rates up to 30 tons per hour:

$$E = 4.10 * P^{0.67}$$

For process weight rates in excess of 30 tons per hour:

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

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), Malmstrom shall not burn liquid or solid fuels containing sulfur in excess of 1 lb/MMBtu fired, unless otherwise specified by rule or in this permit.
- A.10. Pursuant to ARM 17.8.322(5), Malmstrom 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), Malmstrom 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, Malmstrom 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, Malmstrom 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. Malmstrom shall not combust any hospital/medical/infectious waste, as defined in 40 CFR 60, Subpart Ce, at their facility (ARM 17.8.749 and 40 CFR 60, Subpart Ce).
- A.15. Pursuant to ARM 17.8.1211(1)(c) and 40 CFR Part 98, Malmstrom shall comply with requirements of 40 CFR Part 98 – Mandatory Greenhouse Gas Reporting, as applicable (ARM 17.8.1211(1)(c), NOT an applicable requirement under Title V).

- A.16. Pursuant to ARM 17.8.342 and 40 CFR 63.6, Malmstrom 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.17. On or before February 15 and August 15 of each year, Malmstrom 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, Malmstrom may submit a single report, provided that it contains all the information required by Sections 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.18. By February 15 of each year, Malmstrom 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. EU001, EU002, EU003 – Heating Plant Boiler #1 (Coal & Natural Gas), Heating Plant Boiler #2 (Natural Gas Only), Heating Plant Boiler #3 (Coal & Natural Gas)

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
B.1, B.12, B.21, B.27, B.28	Opacity	20%	Method 9 Or	Semiannual	Semiannual
			Visual Survey	Weekly	Semiannual

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
B.2, B.7, B.13, B.17, B.21, B.25, B.27, B.28	Particulate Matter Fuel Burning	4.0 lb/hr	Method 5	Every 4 Years	Semiannual
B.3, B.7, B.10, B.14, B.17, B.21, B.25, B.27, B.28	Sulfur Dioxide Emissions	0.320 lb/MMBtu; or 33.90 lb/hr	Method 6	Every 2 Years	Semiannual
			Coal Analysis and Record Keeping	All Coal Shipments	Semiannual
B.4, B.7, B.15, B.17, B.21, B.25, B.27, B.28	Oxides of Nitrogen Emissions	0.50 lb/MMBtu or 53.00 lb/hr	Method 7	Every 2 Years	Semiannual
B.5, B.6, B.16, B.19, B.22, B.26, B.27, B.28	Heat Content Natural Gas & Coal	999,000 MMBtu/year and 212 MMBtu/hr	Record Keeping	Monthly	Semiannual
B.7, B.17, B.20, B.22, B.27, B.28	Fuel Use: Heating Plant Boiler #2	Natural Gas Fuel Only	Record Keeping	Monthly Fuel Use Log	Semiannual
B.8, B.17, B.20, B.22, B.27, B.28	Fuel Use: Heating Plant Boiler #1 and #3	Coal and/or Natural Gas Fuel Only	Record Keeping	Monthly Fuel Use Log	Semiannual
B.9, B.17, B.18, B.27, B.28	Baghouse and Dry Lime Scrubber Control - Heating Plant Boiler #1 and Heating Plant Boiler #3	Continuous When Combusting Coal	Inspection / CAM Plan (APPENDIX - E)	Monthly Operating Log	Semiannual
B.10, B.17, B.22, B.26, B.28	Coal Sampling	Representative Sample For Each Shipment Received	Record Keeping	Monthly Operating Log	Semiannual
B.11, B.20, B.24, B.29	Hazardous Air Pollutants (HAPs)	40 CFR 63, Subpart JJJJJJ	40 CFR 63, Subpart JJJJJ	40 CFR 63, Subpart JJJJJ	40 CFR 63, Subpart JJJJJJ

Conditions

- B.1. Malmstrom may not cause or authorize emissions from the heating plant boilers #1, #2, and #3 to be discharged into the outdoor atmosphere that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 (2)).
- B.2. Particulate matter emissions from the heating plant boilers #1, #2, and #3 shall not exceed 4.0 pounds per hour (lb/hr) per boiler (ARM 17.8.752).

- B.3. SO₂ emissions from the heating plant boilers #1, #2, and #3 shall not exceed (ARM 17.8.752):
- a. 0.320 lb/MMBtu per boiler; or
 - b. 33.90 lb/hr per boiler.
- B.4. NO_x emissions from the heating plant boilers #1, #2, and #3 shall not exceed (ARM 17.8.752):
- a. 0.50 lb/MMBtu per boiler; or
 - b. 53.0 lb/hr per boiler.
- B.5. Total heat content of combusted fuel (coal and natural gas) in the heating plant boilers #1, #2, and #3 shall not exceed 999,000 MMBtu during any rolling 12-month time period (ARM 17.8.749).
- B.6. The maximum combined operating level for the heating plant boilers #1, #2, and #3 shall not exceed 212 MMBtu/hr of heat input (ARM 17.8.752).
- B.7. Malmstrom shall combust only natural gas in the heating plant boiler #2 (ARM 17.8.749).
- B.8. Malmstrom may combust coal and/or natural gas only in the heating plant boiler #1 and #3 (ARM 17.8.749).
- B.9. Malmstrom shall utilize a dry lime scrubber and baghouse for heating plant boilers #1 and #3 when combusting coal (ARM 17.8.752).
- B.10. Malmstrom shall obtain a representative composite sample for coal analysis from each coal shipment received from each coal supplier. The analysis shall contain, at a minimum, sulfur content, ash content and Btu value (ARM 17.8.749).
- B.11. Malmstrom shall apply with all applicable requirements of 40 CFR 63 Subpart JJJJJJ – NESHAPS: Industrial, Commercial, and Institutional Boilers Area Sources (17.8.342 and 40 CFR 63 Subpart JJJJJJ).

Compliance Demonstration

- B.12. Malmstrom while combusting coal shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on Heating Plant Boilers #1, #2 and #3. Under the visual survey option, once per calendar week, during daylight hours, Malmstrom shall visually survey Heating Plant Boilers #1, #2 and #3 for any visible emissions. If visible emissions are observed during the visual survey, Malmstrom must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 15% opacity based on the Method 9 source test, Malmstrom shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Malmstrom shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall

record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Malmstrom 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 Malmstrom shall perform the Method 9 source tests on Heating Plant Boilers #1, #2 and #3 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, ARM 17.8.749, ARM 17.8.105 and 17.8.106).

- B.13. Malmstrom shall perform a Method 5 particulate matter test on the heating plant boilers #1 and #3 every 4 years to monitor compliance with the particulate matter fuel burning limit in Section III.B.2. The testing shall be performed while the boiler is being fired exclusively on coal (ARM 17.8.749 and ARM 17.8.105).
- B.14. Malmstrom shall perform a Method 6 or another Department approved sulfur dioxide (SO₂) source test on the heating plant boilers #1 and #3 every 2 years to monitor compliance with the sulfur-in-fuel limits in Section III.B.3. The testing shall be performed while the boiler is being fired exclusively on coal (ARM 17.8.749 and ARM 17.8.105).
- B.15. Malmstrom shall perform a Method 7 or another Department approved nitrogen oxide (NO_x) source test on the heating plant boilers #1, #2, and #3 every 2 years to monitor compliance with the NO_x emission limits in Section III.B.4 (ARM 17.8.749 and ARM 17.8.105).
- B.16. Total Btus combusted in the heating plant boilers #1, #2, and #3 shall be determined on a monthly basis using the following equation (ARM 17.8.749):

$$\text{Total Btus Combusted} = (A \times B) + (C \times D)$$

Where: A = Natural gas combusted (MMscf)
B = Average heat content of the natural gas (Btu/MMscf)
C = Coal combusted (tons)
D = Average heat content of the coal (Btu/ton)

- B.17. Malmstrom shall monitor compliance with the Boiler #1, #2, and #3 fuel use, fuel analysis, and emission control requirements through recordkeeping (ARM 17.8.749 and ARM 17.8.1213).
- B.18. Malmstrom shall monitor baghouse and dry lime scrubber performance for Boiler #1 and #3 in accordance with Appendix E, Compliance Assurance Monitoring (ARM 17.8.1213).

- B.19. Malmstrom shall conduct a representative composite coal analysis from each coal shipment received from each coal supplier. The analysis shall contain, at a minimum, sulfur content, ash content and Btu value (ARM 17.8.749).
- B.20. Malmstrom shall comply with all applicable requirements of 40 CFR 63 Subpart JJJJJJ – NESHAPS: Industrial, Commercial, and Institutional Boilers Area Sources (17.8.342 and 40 CFR 63 Subpart JJJJJJ).

Recordkeeping

- B.21. All compliance source test recordkeeping shall be performed in accordance with the test method used and the Montana 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.

If visual surveys are performed, Malmstrom shall maintain a log to verify that the visual surveys were performed as specified in Section III.B.12. 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 17.8.106 and 17.8.1212).

- B.22. Malmstrom shall maintain, on site, a monthly operations and maintenance log. The log shall include the following (ARM 17.8.1212):
 - a. The calculated daily and monthly heat content values for the heating plant boilers #1, #2, and #3 as specified in Sections III.B.5 and III.B.6;
 - b. The type of fuel fired in the heating plant boilers #1, #2, and #3 on a daily basis;
 - c. When combusting coal in heating plant boilers #1 and #3, as specified in Section III.B.9, the operating status of the baghouse and dry lime scrubber operation; the date, duration, and reason for any baghouse and/or dry lime scrubber operational down time; and a description of any maintenance activities performed on either piece of equipment, the description shall include the date, time, operator's initials, and type of work performed; and
 - d. Coal analysis for all coal shipments, from all suppliers of coal, containing at a minimum the information specified in Section III.B.10.
- B.23. Malmstrom shall record the amount of coal being combusted and a coal analysis for sulfur and BTU value during all compliance source tests on the heating plant Boilers #1 and #3. (ARM 17.8.749 and ARM 17.8.106).
- B.24. Malmstrom shall meet the applicable recordkeeping requirements as required by 40 CFR 63 Subpart JJJJJJ – NESHAPS: Industrial, Commercial, and Institutional Boilers Area Sources (17.8.342 and 40 CFR 63 Subpart JJJJJJ).

Reporting

- B.25. The Method 5, 6, and 7 test reports as specified in Sections III.B.13, III.B.14, and III.B.15 shall be submitted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106 and ARM 17.8.1212).
- B.26. Malmstrom shall provide the Department with a record of the amount of coal being combusted and a coal analysis for sulfur and Btu value during all compliance source tests on Boilers #1 and #3. (ARM 17.8.749 and ARM 17.8.105).
- B.27. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- B.28. The semiannual monitoring report shall provide (ARM 17.8.1212):
- Results of any Method 9 test conducted during the reporting period; the actual test report need only be submitted to the Department, upon request, as specified by Section III.B.21;
 - If weekly visual surveys are performed during the reporting period, a summary of the results contained in the weekly visual observations log;
 - Results of any Method 5, 6, and 7 source tests conducted during the reporting period; the actual test report must be submitted as specified by Section III.B.21;
 - A summary of maintenance activities for the baghouse as required in Section III.B.22.c; and
 - A summary of the coal analysis and sampling according to Section III.B.10.
 - A summary of compliance activities associated with the applicable CAM requirements as specified in Section III.B.18.
- B.29. Malmstrom shall meet the applicable reporting requirements as required by 40 CFR 63 Subpart JJJJJJ – NESHAPS: Industrial, Commercial, and Institutional Boilers Area Sources (17.8.342 and 40 CFR 63 Subpart JJJJJJ).

C. EU004 – Auxiliary Power Generator Building 82110

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
C.1, C.6, C.11, C.15, C.16	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	Semiannual
C.2, C.7, C.12, C.15, C.16	Particulate Matter Fuel Burning	$E=1.026 \cdot H^{-0.233}$	Diesel Fuel	Ongoing	Semiannual

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
C.3, C.8, C.12, C.15, C.16	Sulfur in Fuel	1lb/MMBtu	Diesel Fuel	Ongoing	Semiannual
C.4, C.9, C.13, C.15, C.16	Hours of Operation	500 Hours of Operation During any Rolling 12 Month Time Period	Operating Log	Monthly	Semiannual
C.5, C.10, C.14, C.17	Hazardous Air Pollutants (HAPs)	40 CFR 63, Subpart ZZZZ	40 CFR 63, Subpart ZZZZ	40 CFR 63, Subpart ZZZZ	40 CFR 63, Subpart ZZZZ

Conditions

- C.1. Malmstrom may not cause or authorize any emissions, from the building 82110 auxiliary power generator, to be discharged into the outdoor atmosphere that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)).
- C.2. Malmstrom shall not cause or authorize particulate matter, caused by the combustion of fuel from new fuel-burning equipment (installed after November 23, 1968), to be discharged from any stack or chimney into the outdoor atmosphere in excess of the value calculated by $E=1.026 \cdot H^{-0.233}$, where H is the heat input capacity in MMBtu per hour and E is the maximum allowable particulate emissions rate in lb/MMBtu (ARM 17.8.309).
- C.3. The building 82110 auxiliary power generator shall not burn liquid or solid fuels containing sulfur in excess of 1 lb/MMBtu fired, unless otherwise specified by rule or in this permit (ARM 17.8.322(4)).
- C.4. The building 82110 auxiliary generator shall be limited to a maximum of 500 hours of operation during any rolling 12-month time period (ARM 17.8.1211).
- C.5. Malmstrom shall apply with all applicable requirements of 40 CFR 63 Subpart ZZZZ – NESHAPS: Stationary Reciprocating Internal Combustion Engines (17.8.342 and 40 CFR 63 Subpart ZZZZ).

Compliance Demonstration

- C.6. As required by the Department and Section III.A.1, Malmstrom shall perform a Method 9 opacity test to monitor compliance with the 20% opacity limit contained in Section III.C.1. The test methods and procedures shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.105 and ARM 17.8.106).
- C.7. Compliance with the particulate from fuel combustion requirement in Section III.C.2 may be satisfied by burning distillate (diesel) fuel only (ARM 17.8.1213).
- C.8. Compliance with the sulfur in fuel requirement in Section III.C.3 may be satisfied by burning distillate (diesel) fuel only (ARM 17.8.1213).

- C.9. Compliance with the hours of operation limitation in Section III.C.4 may be monitored by logging the date, time, hours of operation, and operators' initials whenever the building 82110 auxiliary power generator is utilized for emergency power generation (ARM 17.8.1213).
- C.10. Malmstrom shall meet the applicable requirements of all testing and procedures of ARM 17.8.342 which references 40 CFR 63 Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines (ARM 17.8.342 and 40 CFR 63 Subpart ZZZZ).

Recordkeeping

- C.11. Method 9 test reports verifying compliance with the opacity limitation in Section III.C.1 must be kept on site and must be submitted to the Department in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106 and ARM 17.8.1212).
- C.12. Malmstrom shall maintain fuel use records to verify compliance with the particulate matter fuel-burning limit in Section III.C.2 or the sulfur in fuel limit in Section III.C.3 (ARM 17.8.1212).
- C.13. Malmstrom shall maintain on site a log indicating the date, time, hours of operation, and operator's initials whenever the building 82110 auxiliary power generator is utilized for emergency power generation. In addition, Malmstrom shall monthly sum the total hours of operation of the building 82110 auxiliary power generator for the previous rolling 12-month time period (ARM 17.8.1212).
- C.14. Malmstrom shall meet the applicable recordkeeping requirements as required by 40 CFR 63Subpart ZZZZ- Stationary Reciprocating Internal Combustion Engines (17.8.342 and 40 CFR 63 Subpart ZZZZ).

Reporting

- C.15. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- C.16. The semiannual monitoring report shall provide (ARM 17.8.1212):
 - a. A summary of results of any Method 9 testing conducted during that semiannual period in accordance with Section III.C.6;
 - b. A summary showing that only diesel fuel was used to fire the building 82110 auxiliary power generator; and
 - c. A summary indicating compliance with the hourly limitation in Section III.C.4. The summary shall indicate that the hourly limit has not been exceeded during the previous 6 rolling 12-month time periods.
- C.17. Malmstrom shall meet the applicable reporting requirements as required by 40 CFR 63 Subpart ZZZZ- Stationary Reciprocating Internal Combustion Engines (17.8.342 and 40 CFR 63 Subpart ZZZZ).

D. EU005 – Coal Yard Handling System

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
D.1, D.4, D.7, D.10, D.11	Opacity	20%	Method 9	Semiannually	Semiannual
			Visual Survey	Weekly	Semiannual
D.2, D.5, D.8, D.10, D.11	Particulate Matter Emissions	0.02 gr/dscf	Method 5	As Required by the Department and Section III.A.1	Semiannual
D.3, D.6, D.9, D.10, D.11	Baghouse	Operation and Maintenance	Record Keeping	Ongoing	Semiannual

Conditions

- D.1. Malmstrom shall not cause or authorize any emissions to be discharged into the outdoor atmosphere, from the coal yard handling system, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)).
- D.2. Malmstrom shall not emit, from the coal yard handling system baghouses, particulate matter in excess of 0.02 gr/dscf (ARM 17.8.752).
- D.3. A fabric filter baghouse shall be used continuously to control transfer point emissions from the coal yard handling system whenever the coal yard handling system is in operation (ARM 17.8.752).

Compliance Demonstration

- D.4. Once per calendar week whenever Malmstrom is utilizing coal to fire heating plant Boilers #1 and #3 during daylight hours, Malmstrom shall visually survey emissions from the coal yard handling system and associated fabric filter baghouses for any sources of excessive emissions. For the purpose of this survey, excessive emissions are considered to be any visible emissions, which meet or exceed 15% opacity. If sources of excessive emissions are identified, Malmstrom shall immediately conduct a Method 9 or take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Malmstrom shall immediately conduct a subsequent visual survey to monitor compliance. The person conducting the visual survey shall record the results of the survey in a log, including any corrective action taken. Conducting a visual survey does not relieve Malmstrom of liability for a violation determined using Method 9.

If visual surveys are not conducted once per calendar week during the reporting period, as specified above, Malmstrom shall perform a semiannual Method 9 source test for the visible emissions from the affected unit. 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 (ARM 17.8.106 and ARM 17.8.1213).

- D.5. As required by the Department and Section III.A.1, Malmstrom shall perform a Method 5 test to monitor compliance with the emission limit in Section III.D.2. The Method 5 test shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual to monitor compliance with the particulate matter limitation in Section III.D.2 (ARM 17.8.106 and ARM 17.8.1213).
- D.6. Compliance with the fabric filter baghouse control requirement in Section III.D.3 shall be demonstrated by the recordkeeping requirements in Section III.D.9 (ARM 17.8.1213).

Recordkeeping

- D.7. Malmstrom shall maintain a log to verify that the visual surveys were performed as specified in Section III.D.4. Each log entry must include the date, time, results of the survey, and observer's initials. If Method 9 tests are conducted, reports must be maintained on site and must be submitted to the Department upon request in accordance with the Montana Source Protocol and Procedures Manual. Whether visual surveys or Method 9 tests are conducted, if any corrective action is required, the time, date, observer's initials, and any preventative or corrective action taken must be recorded in the log (ARM 17.8.1212).
- D.8. Any Method 5 test reports, demonstrating compliance with the emission limit in Section III.D.2, must be maintained on site and must be submitted to the Department, upon request, in accordance with the Montana Source Protocol and Procedures Manual (ARM 17.8.1212).
- D.9. Malmstrom shall maintain an on-site operating log including the date, time, and the operator's initials to verify compliance with the fabric filter baghouse operating requirement in Section III.D.3. Further, the operating log shall include the date, time, purpose, and the operators (maintenance personnel) initials for any inspection and/or maintenance activities performed on all coal yard handling system fabric filter baghouses. Malmstrom shall submit records to the Department upon request (ARM 17.8.1212).

Reporting

- D.10. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- D.11. The semiannual reporting shall provide (ARM 17.8.1212):
 - a. A summary of results of any Method 9 source testing that was performed, during that semiannual period, to monitor compliance with the opacity limitation in Section III.D.1;
 - b. Any Method 5 source testing that was performed, during that semiannual period, to monitor compliance with the emission limit in Section III.D.2; and
 - c. A summary of baghouse operation and maintenance activities to demonstrate compliance with the fabric filter baghouse control requirement in Section III.D.3.

E. EU006, EU007 – Landfill #1 and Landfill #2

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
E.1, E.2, E.3, E.4, E.5	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	Annual Certification
					Semiannual

Conditions

E.1. Malmstrom shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the production, handling, transportation, or storage of any material unless reasonable precautions 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 (ARM 17.8.308).

Compliance Demonstration

E.2. As required by the Department and Section III.A.1, Malmstrom shall conduct a Method 9 source test to monitor compliance with the opacity limitation in Section III.E.1. The test methods and procedures shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.1213).

Recordkeeping

E.3. All source test recordkeeping shall be performed in accordance with the test method used, 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).

Reporting

E.4. The annual compliance certification must contain a certification statement as to whether Malmstrom is in compliance with the opacity limitation in Section III.E.1 (ARM 17.8.1212).

E.5. The semiannual monitoring report shall provide a summary of visual surveys performed and logged as specified by Section III.E.1, or a summary of the results of any Method 9 source test conducted during the reporting period (ARM 17.8.1212).

F. EU008 – JP-8 Fuel Storage Tanks (H-1 and H-2)

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
F.1, F.4, F.7, F.10, F.11	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	Annual Certification
					Semiannual

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
F.2, F.5, F.8, F.10, F.11	Fuel Storage	JP-8 or fuel with <3.5 kPa Vapor Pressure Only	Record Keeping	Each Tank Fill	Annual Certification
					Semiannual
F.3, F.6, F.9, F.10, F.11	Internal Floating Roof	Install and Maintain	Inspection	Semiannually	Annual Certification
					Semiannual

Conditions

- F.1. Malmstrom shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the production, handling, transportation, or storage of any material unless reasonable precautions 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 (ARM 17.8.308).
- F.2. Malmstrom shall store JP-8 jet fuel or a similar jet fuel with a vapor pressure of less than 3.5 kPa only (ARM 17.8.749).
- F.3. An internal floating roof shall be installed on each tank (ARM 17.8.752).

Compliance Demonstration

- F.4. As required by the Department and Section III.A.1, Malmstrom shall conduct a Method 9 source test to monitor compliance with the opacity limitation in Section III.F.1. The test methods and procedures shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.1213).
- F.5. Malmstrom shall document the type of fuel stored each time fuel is added to the tanks. If the fuel is other than JP-8 jet fuel, Malmstrom shall document the fuel vapor pressure to monitor compliance with the requirement in Section III.F.2 (ARM 17.8.1213).
- F.6. On a semiannual basis, Malmstrom shall inspect each internal floating roof for integrity and maintain each internal floating roof according to the manufacturers' specifications (ARM 17.8.1213).

Recordkeeping

- F.7. All source test recordkeeping shall be performed in accordance with the test method used, 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).
- F.8. Malmstrom shall maintain an on-site fuel tank fill log including the date, time, and the operator's initials to verify compliance with the fuel storage requirement in Section III.F.2. Malmstrom shall submit records to the Department upon request (ARM 17.8.1212).

F.9. Malmstrom shall maintain a record of any maintenance activity conducted on the floating internal roof of any affected tank (ARM 17.8.1212).

Reporting

F.10. The annual compliance certification reports must contain a certification statement as to whether Malmstrom is in compliance with the opacity limitation, fuel storage requirement, and internal floating roof requirement in Sections III.F.1, III.F.2, and III.F.3, respectively (ARM 17.8.1212).

F.11. The semiannual monitoring report shall provide (ARM 17.8.1212):

- a. Summary of visual surveys performed and logged as specified by Section III.F.4, or a summary of the results of any Method 9 source test conducted during the reporting period;
- b. Summary of the fuel type and log of vapor pressures maintained as specified by Section III.F.5; and
- c. Summary of inspection results of maintenance activity on the internal floating roof as specified by Section III. F.6.

G. EU009 – Building 780 Emergency/Back-Up Diesel Generator

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
G.1, G.6, G.10, G.14, G.15	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	Semiannual
G.2, G.7, G.11, G.14, G.15	Particulate Matter Fuel Burning	$E=1.026*H^{-0.233}$	Diesel Fuel	Ongoing	Semiannual
G.3, G.7, G.11, G.14, G.15	Sulfur in Fuel	1lb/MMBtu	Diesel Fuel	Ongoing	Semiannual
G.4, G.8, G.12, G.14, G.15	Hours of Operation	Operation Limited to Specific Situations	Operating Log	Monthly	Semiannual
G.5, G.9, G.13, G.16	Hazardous Air Pollutants (HAPs)	40 CFR 63, Subpart ZZZZ	40 CFR 63, Subpart ZZZZ	40 CFR 63, Subpart ZZZZ	40 CFR 63, Subpart ZZZZ

Conditions

G.1. Malmstrom may not cause or authorize any emissions, from the building 780 emergency/back-up diesel generator, to be discharged into the outdoor atmosphere that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)).

- G.2. Malmstrom shall not cause or authorize particulate matter, caused by the combustion of fuel from new fuel-burning equipment (installed after November 23, 1968), to be discharged from any stack or chimney into the outdoor atmosphere in excess of the value calculated by $E=1.026 \cdot H^{0.233}$, where H is the heat input capacity in MMBtu per hour and E is the maximum allowable particulate emissions rate in lb/MMBtu (ARM 17.8.309).
- G.3. The building 780 emergency/back-up diesel generator shall not burn liquid or solid fuels containing sulfur in excess of 1 lb/MMBtu fired, unless otherwise specified by rule or in this permit (ARM 17.8.322(4)).
- G.4. The building 780 emergency/back-up diesel generator shall only be operated during periods when electric power from the local utility is interrupted or as necessary for routine maintenance of the generator (ARM 17.8.749).
- G.5. Malmstrom shall apply with all applicable requirements of 40 CFR 63 Subpart ZZZZ – NESHAPS: Stationary Reciprocating Internal Combustion Engines (17.8.342 and 40 CFR 63 Subpart ZZZZ).

Compliance Demonstration

- G.6. As required by the Department and Section III.A.1, Malmstrom shall test the building 780 emergency/back-up diesel generator for opacity, and monitor compliance with the limitation contained in Section III.G.1. The test methods and procedures shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.105 and ARM 17.8.106).
- G.7. Compliance with the particulate from fuel combustion requirement and the sulfur in fuel requirement in Sections III.G.2 and III.G.3 shall be satisfied by burning distillate (diesel) fuel only (ARM 17.8.1213).
- G.8. Compliance with the limits in Section III.G.4 shall be demonstrated by logging the date, time, hours of operation, reason for use, and operators' initials whenever the building 780 emergency/back-up diesel generator is utilized for emergency power generation (ARM 17.8.1213).
- G.9. Malmstrom shall meet the applicable requirements of all testing and procedures of ARM 17.8.342 which references 40 CFR 63 Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines (ARM 17.8.342 and 40 CFR 63 Subpart ZZZZ).

Recordkeeping

- G.10. All source test recordkeeping shall be performed in accordance with the test method used, 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).
- G.11. Malmstrom shall maintain fuel use records to verify compliance with the particulate matter fuel-burning limit in Section III.G.2 and the sulfur in fuel limit in Section III.G.3 (ARM 17.8.1212).

- G.12. Malmstrom shall maintain on site a log as described in Section III.G.8. Malmstrom shall include in that log the fuel type used whenever the building 780 emergency/back-up generator is used for emergency power generation. In addition, Malmstrom shall monthly sum the total hours of operation of the building 780 emergency/back-up generator for the current month (ARM 17.8.1212).
- G.13. Malmstrom shall meet the applicable recordkeeping requirements as required by 40 CFR 63 Subpart ZZZZ- Stationary Reciprocating Internal Combustion Engines (17.8.342 and 40 CFR 63 Subpart ZZZZ).

Reporting

- G.14. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- G.15. The semiannual monitoring report shall provide (ARM 17.8.1212):
- a. A summary of results of any source testing conducted in accordance with Section III.G.6 during that semiannual period;
 - b. A summary showing that only diesel fuel was used to fire the building 780 emergency/back-up diesel generator whenever the generator was utilized; and
 - c. A summary showing that the building 780 emergency/back-up generator was only used when power from the local utility was interrupted or as necessary for routine maintenance of the generator and that the log required in Sections III.G.8 and III.G.12 (including the total hours of operation) was maintained.
- G.16. Malmstrom shall meet the applicable reporting requirements as required by 40 CFR 63 Subpart ZZZZ- Stationary Reciprocating Internal Combustion Engines (17.8.342 and 40 CFR 63 Subpart ZZZZ).

H. EU010 – Building 500 Emergency/Back-Up Diesel Generator

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
H.1, H.5, H.8, H.11, H.12	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	Semiannual
H.2, H.6, H.9, H.11, H.12	Particulate Matter Fuel Burning	$E=1.026 \cdot H^{0.233}$	Diesel Fuel	Ongoing	Semiannual
H.3, H.6, H.9, H.11, H.12	Sulfur in Fuel	1lb/MMBtu	Diesel Fuel	Ongoing	Semiannual
H.4, H.7, H.10	Hazardous Air Pollutants (HAPs)	40 CFR 63, Subpart ZZZZ	40 CFR 63, Subpart ZZZZ	40 CFR 63, Subpart ZZZZ	40 CFR 63, Subpart ZZZZ

Conditions

- H.1. Malmstrom may not cause or authorize any emissions, from the building 500 emergency/back-up diesel generator, to be discharged into the outdoor atmosphere that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)).
- H.2. Malmstrom shall not cause or authorize particulate matter, caused by the combustion of fuel from new fuel-burning equipment (installed after November 23, 1968), to be discharged from any stack or chimney into the outdoor atmosphere in excess of the value calculated by $E=1.026 \cdot H^{0.233}$, where H is the heat input capacity in MMBtu per hour and E is the maximum allowable particulate emissions rate in lb/MMBtu (ARM 17.8.309).
- H.3. The building 500 emergency/back-up diesel generator shall not burn liquid or solid fuels containing sulfur in excess of 1 lb/MMBtu fired, unless otherwise specified by rule or in this permit (ARM 17.8.322(4)).
- H.4. Malmstrom shall apply with all applicable requirements of 40 CFR 63 Subpart ZZZZ – NESHAPS: Stationary Reciprocating Internal Combustion Engines (17.8.342 and 40 CFR 63 Subpart ZZZZ).

Compliance Demonstration

- H.5. As required by the Department and Section III.A.1, Malmstrom shall test the building 500 emergency/back-up diesel generator for opacity, and monitor compliance with the limitation contained in Section III.H.1. The test methods and procedures shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.105 and ARM 17.8.106).
- H.6. Compliance with the particulate from fuel combustion requirement and the sulfur in fuel requirement in Sections III.H.2 and III.H.3 shall be satisfied by burning distillate (diesel) fuel only (ARM 17.8.1213).

H.7. Malmstrom shall meet the applicable requirements of all testing and procedures of ARM 17.8.342 which references 40 CFR 63 Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines (ARM 17.8.342 and 40 CFR 63 Subpart ZZZZ).

Recordkeeping

H.8. All source test recordkeeping shall be performed in accordance with the test method used, 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).

H.9. Malmstrom shall maintain a record indicating that only distillate (diesel) fuel was burned for building 500 emergency/back-up diesel generator operations (ARM 17.8.1212).

H.10. Malmstrom shall meet the applicable recordkeeping requirements as required by 40 CFR 63 Subpart ZZZZ- Stationary Reciprocating Internal Combustion Engines (17.8.342 and 40 CFR 63 Subpart ZZZZ).

Reporting

H.11. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

H.12. The semiannual reporting shall provide (ARM 17.8.1212):

- a. A summary of results of any source testing conducted in accordance with Section III.H.5 during that semiannual period; and
- b. A summary showing that only diesel fuel was used to fire the building 500 emergency/back-up diesel generator whenever the generator was utilized.

H.13. Malmstrom shall meet the applicable reporting requirements as required by 40 CFR 63 Subpart ZZZZ- Stationary Reciprocating Internal Combustion Engines (17.8.342 and 40 CFR 63 Subpart ZZZZ).

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 Quality 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, Subparts DDD 40 CFR 60, Subparts FFF-LLL 40 CFR 60, Subparts NNN-WWW 40 CFR 60, Subpart AAAA-DDDD 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-J 40 CFR 63, Subparts L-O 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	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 LLL-RRR 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- YYYY 40 CFR 63, Subparts AAAAA- NNNNN 40 CFR 63, Subparts PPPPP- TTTTT 40 CFR 82, Subparts A-E 40 CFR 82, Subparts G-H	These requirements are not applicable because the facility is not an affected source as defined in these regulations.
	40 CFR 72 through 40 CFR 78	These requirements are not applicable because the facility is not an affected source as defined by the acid rain regulations.

B. Emission Units

The permit application identified applicable requirements: non-applicable requirements for individual or specific emissions units were not listed. The Department has 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 C 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 C 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)(b)

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)(b). 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

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 5 tons per year of any pollutant, except:
 - 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 5 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).

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 B 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 Malmstrom, 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 Sec. 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 Malmstrom. 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
IEU01	Aircraft Maintenance
IEU02	Aircraft Refueling
IEU03	Ground Vehicle Maintenance
IEU04	Privately Owned Vehicle Refueling
IEU05	Government Owned Vehicle Refueling
IEU06	Summer Hot Water Generators
IEU07	Refrigeration and Air Conditioning
IEU08	Redhorse Auxiliary Generators
IEU09	Craft / Hobby Centers
IEU010	Open Grill Restaurants
IEU011	Small Arms Firing
IEU012	Welding
IEU013	Woodworking
IEU014	Explosive Ordinance Disposal
IEU015	Oil / Water Separators
IEU016	Fire Training
IEU017	Pesticide Use
IEU018	Painting of Structures
IEU019	Fuel Storage Tanks (Excluding JP-8 Fuel Tanks H-1 and H-2)
IEU020	Spray Painting Booths
IEU021	Miscellaneous Chemical Use
IEU022	Solvent Degreasing
IEU023	Building 1075 Natural Gas Fired Boilers
IEU024	Asphalt Content Tester
IEU025	Abrasive Blasting
IEU026	Equipment Leaks
IEU027	Fuel Transfer
IEU028	Heavy Construction Operations
IEU029	Landfarm Operations
IEU030	Lime Storage Handling
IEU031	Small Emergency Generators

Emissions Unit ID	Description
IEU032	Wet Cooling Towers
IEU033	5.1 MMBtu/hr Natural Gas Fueled Water Heater (Building 1010).
IEU034	35 kW Emergency/Backup Diesel Generator (Building 18902)
IEU035	Two 5.1 MMBtu/hr Natural Gas Fired Hot Water Heating Boilers (Building 1012)
IEU036	5.1 MMBtu/hr Natural Gas Fired Hot Water Heating Boiler (Building 1180)

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 Malmstrom;
- (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;
- (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 Sec. 7411 of the FCAA, including Sec. 7411(d);
- (d) Any standard or other requirement under Sec. 7412 of the FCAA, including any requirement concerning accident prevention under Sec. 7412(r)(7), but excluding the contents of any risk management plan required under Sec. 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 Sec. 7661c(b) or Sec. 7414(a)(3) of the FCAA;
- (g) Any standard or other requirement governing solid waste incineration, under Sec. 7429 of the FCAA;
- (h) Any standard or other requirement for consumer and commercial products, under Sec. 7511b(e) of the FCAA;
- (i) Any standard or other requirement for tank vessels, under Sec. 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 Sec. 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 Sec. 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 Part 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 Sec. 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

"On-Site," as it relates to the physical location of the Title V Operating Permit, means any location within base property.

"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 Sec. 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;
- (e) Any pollutant subject to a standard or other requirement established or promulgated under Sec. 7412 of the FCAA, including, but not limited to, the following:
 - (i) Any pollutant subject to requirements under Sec. 7412(j) of the FCAA. If the administrator fails to promulgate a standard by the date established in Sec. 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 Sec. 7412(e) of the FCAA
 - (ii) Any pollutant for which the requirements of Sec. 7412(g)(2) of the FCAA have been met, but only with respect to the individual source subject to Sec. 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
Air, Energy, and Mining Division
Air Quality Bureau
P.O. Box 200901
Helena, MT 59620-0901

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

Permit Modifications:

Montana Department of Environmental Quality
Air, Energy, and Mining Division
Air Quality 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 Malmstrom, permitting authority, inspectors, and the public.

- 1. Direction to Plant:** Exit Interstate 15 on 10th Avenue South and go approximately six miles east to 57th Street. Go north on 57th Street approximately 1 mile to 2nd Avenue North. Go east on 2nd Avenue North approximately one mile to Base gate.
- 2. Safety Equipment Required:** Hard hats, steel toe boots, and hearing protection are required in various locations at the base according to Air Force Occupational Safety and Health (AFOSH) requirements.
- 3. Facility Plot Plan:** A facility plot plan was submitted during the application process for the initial Title V Operating Permit #OP1427-00 and is on file with the Department.

APPENDIX - E. COMPLIANCE ASSURANCE MONITORING PLAN

I. Emitting Unit: EU001 – Heating Plant Boiler #1

Pollutant: PM₁₀

Control Device: Fabric Filter Baghouse

Emission Limit: 4 pounds per hour (lb/hr)

Monitoring Approach: Key elements of the monitoring approach for this Compliance Assurance Monitoring (CAM) applicable pollutant specific emitting unit (PSEU) are contained in Table I. A complete CAM plan is contained in the United States Department of the Air Force – Malmstrom Air Force Base (Malmstrom) application for Title V operating permit renewal (#OP1427-05) and is on file with the Department. Complete copies of this CAM plan are available from the Department upon request.

Table I: Heating Plant Boiler #1 Fabric Filter Baghouse – PM₁₀		
A. General Criteria	Indicator #1	Indicator #2
1. Indicator	Opacity	Pressure Drop
2. Monitoring Approach	Opacity is measured continuously with a continuous opacity monitoring system (COMS)	Pressure drop across the baghouse is monitored and electronically recorded (computer printout) on an hourly basis
3. Indicator Range	The indicator level is an opacity reading equal to or exceeding 20%. An excursion will be defined as any COMS reading equal to or greater than 20% opacity	The indicator range is a pressure drop between 0.10 and 4.0 inches of water, except during routine bag cleaning cycles where the range is 0.1 to 8.0 inches of water
4. Quality Improvement Plan (QIP) Threshold	The QIP threshold is excursions occurring greater than 5% of the operational time in any 6-month reporting period	The QIP threshold is excursions occurring greater than 5% of the operational time in any 6-month reporting period
B. Performance Criteria	Indicator #1	Indicator #2
1. Data Representativeness	The monitoring system consists of a COMS monitoring opacity of the exhaust gas stream on a continuous basis	The monitoring system consists of pressure drop across the baghouse
2. Verification of Operational Status	COMS digital read-out in boiler control room	Pressure sensor readout in boiler control room
3. Quality Assurance/Quality Control	Calibrate, maintain, and operate COMS according to manufacturer's recommendations	Calibrate, maintain, and operate pressure drop instrumentation according to manufacturer's recommendations
4. Monitoring Frequency	Continuous monitoring via opacity alarm	Continuous electronic monitoring and hourly electronic recording
5. Data Collection Procedures	Excursions are printed out	Electronic reading
6. Averaging Period	Continuous, ongoing	Hourly

- II. Emitting Unit:** EU003 – Heating Plant Boiler #3
Pollutant: PM₁₀
Control Device: Fabric Filter Baghouse
Emission Limit: 4 lb/hr

Monitoring Approach: Key elements of the monitoring approach for this CAM applicable PSEU are contained in Table II. A complete CAM plan is contained in the Malmstrom application for Title V operating permit renewal (#OP1427-08) and is on file with the Department. Complete copies of this CAM plan are available from the Department upon request.

Table II: Heating Plant Boiler #3 Fabric Filter Baghouse – PM₁₀		
A. General Criteria	Indicator #1	Indicator #2
1. Indicator	Opacity	Pressure Drop
2. Monitoring Approach	Opacity is measured continuously with a COMS	Pressure drop across the baghouse is monitored and electronically recorded (computer printout) on an hourly basis
3. Indicator Range	The indicator level is an opacity reading equal to or exceeding 20%. An excursion will be defined as any COMS reading equal to or greater than 20% opacity	The indicator range is a pressure drop between 0.10 and 4.00 inches of water, except during routine bag cleaning cycles where the range is 0.1 to 8.0 inches of water
4. QIP Threshold	The QIP threshold is excursions occurring greater than 5% of the operational time in any 6-month reporting period	The QIP threshold is excursions occurring greater than 5% of the operational time in any 6-month reporting period
B. Performance Criteria	Indicator #1	Indicator #2
1. Data Representativeness	The monitoring system consists of a COMS monitoring opacity of the exhaust gas stream on a continuous basis	The monitoring system consists of pressure drop across the baghouse
2. Verification of Operational Status	COMS digital read-out in boiler control room	Pressure sensor readout in boiler control room
3. Quality Assurance/Quality Control	Calibrate, maintain, and operate COMS according to manufacturer's recommendations	Calibrate, maintain, and operate pressure drop instrumentation according to manufacturer's recommendations
4. Monitoring Frequency	Continuous monitoring via opacity alarm	Continuous electronic monitoring and hourly electronic recording
5. Data Collection Procedures	Excursions are printed out	Electronic reading
6. Averaging Period	Continuous, ongoing	Hourly

III. Emitting Unit: EU001 – Heating Plant Boiler #1

Pollutant: SO₂

Control Device: Spray Dryer Absorber (SDA)

Emission Limit: 33.9 lb/hr

Monitoring Approach: Key elements of the monitoring approach for this CAM applicable PSEU are contained in Table III. A complete CAM plan is contained in the Malmstrom application for Title V operating permit renewal (#OP1427-08) and is on file with the Department. Complete copies of this CAM plan are available from the Department upon request.

Table III: Heating Plant Boiler #1 Spray Dryer Absorber – SO₂		
A. General Criteria	Indicator #1	Indicator #2
1. Indicator	Lime slurry flow to SDA penthouse	SDA outlet temperature
2. Monitoring Approach	Lime slurry flow rate is monitored with a flow meter	The SDA outlet temperature is monitored in the exhaust stack
3. Indicator Range	The lime slurry flow rate indicator range is 0.5 to 8.0 gallons per minute (gpm). An excursion will be defined as any lime slurry flow reading outside the indicator range	The SDA outlet temperature indicator range is 170°F to 300°F. An excursion will be defined as any SDA outlet temperature reading outside the indicator range
4. QIP Threshold	The QIP threshold is excursions occurring greater than 5% of the operational time in any 6-month reporting period	The QIP threshold is excursions occurring greater than 5% of the operational time in any 6-month reporting period
B. Performance Criteria	Indicator #1	Indicator #2
1. Data Representativeness	The lime slurry flow rate monitoring system consists of lime slurry flow rate measurements	The SDA outlet temperature monitoring system consists of temperature measurements from the exhaust stack. Temperature readings outside the indicator range are indicative of inadequate or excessive slurry flow or malfunction in the absorber
2. Verification of Operational Status	Lime slurry flow rate read-out in the boiler control room	SDA outlet temperature sensor readout in the boiler control room
3. Quality Assurance/Quality Control	Calibrate, maintain, and operate lime slurry system and monitoring instrumentation according to manufacturer's recommendations	Calibrate, maintain, and operate SDA outlet temperature reading instrumentation according to manufacturer's recommendations
4. Monitoring Frequency	Hourly	Hourly
5. Data Collection Procedures	Lime slurry flow rate is electronically monitored	SDA outlet temperature is electronically monitored
6. Averaging Period	Hourly	Hourly

IV. Emitting Unit: EU003 – Heating Plant Boiler #3

Pollutant: SO₂

Control Device: SDA

Emission Limit: 33.9 lb/hr

Monitoring Approach: Key elements of the monitoring approach for this CAM applicable PSEU are contained in Table IV. A complete CAM plan is contained in the Malmstrom application for Title V operating permit renewal (#OP1427-08) and is on file with the Department. Complete copies of this CAM plan are available from the Department upon request.

Table IV: Heating Plant Boiler #3 Spray Dryer Absorber – SO₂		
A. General Criteria	Indicator #1	Indicator #2
1. Indicator	Lime slurry flow to SDA penthouse	SDA outlet temperature
2. Monitoring Approach	Lime slurry flow rate is monitored with a flow meter	The SDA outlet temperature is monitored in the exhaust stack
3. Indicator Range	The lime slurry flow rate indicator range is 0.5 to 8.0 gallons per minute (gpm). An excursion will be defined as any lime slurry flow reading outside the indicator range	The SDA outlet temperature indicator range is 170°F to 300°F. An excursion will be defined as any SDA outlet temperature reading outside the indicator range
4. QIP Threshold	The QIP threshold is excursions occurring greater than 5% of the operational time in any 6-month reporting period	The QIP threshold is excursions occurring greater than 5% of the operational time in any 6-month reporting period
B. Performance Criteria	Indicator #1	Indicator #2
1. Data Representativeness	The lime slurry flow rate monitoring system consists of lime slurry flow rate measurements	The SDA outlet temperature monitoring system consists of temperature measurements from the exhaust stack. Temperature readings outside the indicator range are indicative of inadequate or excessive slurry flow or malfunction in the absorber
2. Verification of Operational Status	Lime slurry flow rate read-out in the boiler control room	SDA outlet temperature sensor readout in the boiler control room
3. Quality Assurance/Quality Control	Calibrate, maintain, and operate lime slurry system and monitoring instrumentation according to manufacturer's recommendations	Calibrate, maintain, and operate SDA outlet temperature reading instrumentation according to manufacturer's recommendations
4. Monitoring Frequency	Hourly	Hourly
5. Data Collection Procedures	Lime slurry flow rate is electronically monitored	SDA outlet temperature is electronically monitored
6. Averaging Period	Hourly	Hourly