DEQ
Montana Department
of Environmental Quality

January 3, 2017

Mark Cusack
HVAC Supervisor – Facilities Services
Montana State University
P.O. Box 172760
Bozeman, MT 59752-2760

Dear Mr. Cusack:

Montana Air Quality Permit #2821-04 is deemed final as of December 31, 2016, by the Department of Environmental Quality (Department). This permit is for Natural Gas Boilers. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

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

John P. Proulx
Environmental Science Specialist
Air Quality Bureau
(406) 444-5391

JM:JP
Enclosure

Montana Department of Environmental Quality
Air, Energy, and Mining Division

Montana Air Quality Permit #2821-04

Montana State University
MSU Office of Facility Services
6th and Grant
P.O. Box 172760
Bozeman, MT 59717-2760

December 31, 2016

MONTANA AIR QUALITY PERMIT

Issued To: State of Montana
Montana State University
MSU Office of Facility Services
6th and Grant
P.O. Box 172760
Bozeman, MT 59717

MAQP: #2821-04
Application Complete: 12/12/2016
Administrative Amendment (AA) Request Received: 12/12/2016
Department Decision on AA: 12/15/2016
Permit Final: 12/31/2016
AFS #:031-0010-00010

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Montana State University (MSU), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq*., as amended, for the following:

Section I: Permitted Facilities

A. Plant Location

The MSU campus is located in Section 13, Township 2 South, Range 5 East in Gallatin County, Montana.

B. Current Permit Action

During a Department of Environmental Quality (Department) review, staff discovered that Montana Air Quality Permit (MAQP) #2821-03 was missing the appropriate reference to regulatory authority for the certification that emissions are less than those that would require a Title V operating permit, as well as the corresponding permit analysis language pertaining to production limits. Because MSU accepted limits in its MAQP to stay below the Title V permit threshold, the Department established such limits in the MAQP. With such limits, MSU is required to annually certify that its actual emissions are less than those that would require the source to obtain an air quality Title V operating permit. This annual certification is required to be submitted with the annual emission inventory and production and equipment information, and is required to be submitted on or before February 15th of each year. The annual certification is required by ARM 17.8.1204(3)(b) which was included as a permit condition; however, the condition lacked the appropriate rule reference. MAQP #2658-04 includes the rule reference for the certification obligation and also updates language in the permit analysis pertinent to this issue.

Section II: Conditions and Limitations

A. Emission Limitations

1. Emissions from boiler #1 shall not exceed the following (ARM 17.8.752):

NO_X – 0.068 pounds per million British thermal units (lb/MMBtu) and 8.16 pounds per hour (lb/hr) – 3 hour average, excluding startup and shut down, and 0.20 lb/MMBtu – 30-day rolling average, including startup and shutdown.

CO – 0.049 lbs/MMBtu and 5.88 lbs/hr – 3 hour average, excluding startup and shutdown

2. Emissions from boiler #2 shall not exceed the following (ARM 17.8.752):

   NO_X – 0.068 lbs/MMBtu and 4.08 lbs/hr
   CO – 0.049 lbs/MMBtu and 2.94 lbs/hr

3. Emissions from boiler #3 shall not exceed the following (ARM 17.8.752):

   NO_X – 0.068 lbs/MMBtu
   CO – 0.049 lbs/MMBtu
   VOC – 0.18 lbs/hr
   Opacity – 20%

4. MSU shall install and operate low-NO_X burners on boilers #1, #2, and #3 (ARM 17.8.752).

5. MSU shall comply with all applicable standards and limitations, and the reporting, recordkeeping and notification requirements contained in 40 CFR 60, Subpart Db for boiler #1 (ARM 17.8.340 and 40 CFR 60, Subpart Db).

6. MSU shall comply with all applicable standards and limitations, and the reporting, recordkeeping and notification requirements contained in 40 CFR 60, Subpart Dc for boiler #2 (ARM 17.8.340 and 40 CFR 60, Subpart Dc).

7. The total natural gas burned in the three (3) boilers located at the heating complex is limited to 1065.6 million cubic feet (MMcf) calculated over a rolling twelve (12) month period (ARM 17.8.1204).

8. MSU 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 twenty (20) percent or greater, averaged over a rolling twelve (12) month period (ARM 17.8.304).

9. MSU 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 forty (40) percent or greater averaged over six (6) consecutive minutes. This requirement applies to Boiler #3 (ARM 17.8.304).

10. MSU 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 (ARM 17.8.308).

11. MSU shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 20% opacity limitation (ARM 17.8.749).

12. MSU shall not burn liquid or solid fuels containing sulfur in excess of 1 lb/MMBtu fired (ARM 17.8.322).

13. MSU shall limit the sulfur content of gaseous fuel to 50 grains per 100 cubic feet (g/100 cf) calculated as hydrogen sulfide as standard conditions (ARM 17.8.322).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

2. The Department may require further testing (ARM 17.8.105).

C. Continuous Emissions Monitoring Systems

MSU shall either install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) for the measurement of nitrogen oxides from the #1 boiler or shall monitor boiler operations and predict nitrogen oxide emission rates as specified in an alternative monitoring plan (AMP) submitted to, and approved by, the Department pursuant to 40 CFR 60.49b(c).

1. CEMS requirements

The CEMS, if used, shall comply with all applicable provisions of 40 CFR Parts 60.5 through 60.13, Subpart Db, Appendix B – Performance Specifications 2 and Appendix F (ARM 17.8.340 and 40 CFR 60, Subpart Db).

2. Alternative Monitoring Plan Requirements

In an AMP is proposed which uses a predictive emission monitoring system (PEMS) for determining NO_X emissions, the AMP shall include, at a minimum, the information required by 40 CFR 60.49b(c). Quality control and quality assurance for the PEMS data shall be in accordance with the AMP approved by the Department. The proposed QA/QC procedures shall include, at a minimum, an annual relative accuracy test audit (RATA) and procedures and practices to ensure that the data generated by the equipment monitoring the proposed steam generator operating conditions will be representative and accurate (ARM 17.8.749).

D. Compliance Determinations

Compliance with all emissions limits, except the 30-day rolling average NO_X limit for the #1 boiler, will be determined by stack testing in accordance with the Montana Source Test Protocol and Procedures Manual. Compliance with the 30-day rolling average NO_X emission limit for the #1 boiler will be based on information from the CEMS or PEMS as applicable (ARM 17.8.106, ARM 17.8.340, 40 CFR 60, Subpart Db, and ARM 17.8.749).

E. Operational Reporting Requirements

1. MSU shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request.
   The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis. The information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be gathered on a calendar-year basis and is to be submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department (ARM 17.8.505).

   Information shall include the following and may be used to calculate permit fees, and/or may be used to determine compliance with permit conditions. In addition, MSU shall submit the following information annually to the Department by March 15 and it may be submitted along with the annual inventory (ARM 17.8.749):

   a. Amount of natural gas burned in Boiler #1 – MMcf
   b. Amount of natural gas burned in Boiler #2 – MMcf
   c. Amount of natural gas burned in Boiler #3 – MMcf
   d. Hours of operation of each boiler

2. By the 25th day of each month, MSU shall total the MMcf of natural gas burned in each of the three (3) boilers located at the heating plant complex during the previous twelve months to verify compliance with the limitation in Section II.A.7. A written verification shall be submitted to the Department annually. The report for the previous calendar year shall be submitted no later than March 1 and may be submitted along with the annual inventory (ARM 17.8.749).

3. MSU shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information (ARM 17.8.1204).

4. All records compiled in accordance with this permit must be maintained by MSU as a permanent business record for at least five (5) years following the date of the measurement, must be available at the facility for inspection by the Department and must be submitted to the Department upon request (ARM 17.8.749).

F. Notification

MSU shall provide the Department with written notification of the following activities within the specified time frames.

1. Commencement of construction of Boiler #2 within 30 days after commencement of construction. The notification for Boiler #2 shall include the information required by 40 CFR 60.48c (ARM 17.8.340 and 40 CFR 60, Subpart Db and Dc).

2. Anticipated date of initial start-up of Boiler #2 within 30 to 60 days prior to the anticipated start-up date (ARM 17.8.340, and 40 CFR 60, Subpart Db and Dc).

3. Actual date of initial start-up of Boiler #2 within 15 days of the actual start-up date (ARM 17.8.340 and 40 CFR 60, Subpart Db and Dc).

4. Pre-test information must be completed and received by the Department no later than 25 working days prior to any proposed test date, according to the Montana Source Test Protocol and Procedures Manual (ARM 17.8.105).

5. The Department must be notified of any proposed test date 10 working days before that date according to the Montana Source Test Protocol and Procedures Manual (ARM 17.8.105).

SECTION III: General Conditions

A. Inspection – MSU shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment such as CEMS or continuous emission rate monitoring systems(CERMS), or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if MSU fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving MSU of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).

D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by MSU may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

Montana Air Quality Permit (MAQP) Analysis
Montana State University
MAQP #2821-04

I. Introduction/Process Description

Montana State University (MSU) owns and operates multiple natural gas-fired boilers for supplying steam and hot water throughout the MSU campus. The facility is located in Section 13, Township 2 South, Range 5 East, in Gallatin County, Montana.

A. Permitted Equipment

1. Heating Plant

Unit	Year Installed	Size [million British thermal units per hour (MMBtu/hr)]
Boiler #1	1997	120 MMBtu/hr
Boiler #2	1998	60 MMBtu/hr
Boiler #3	1968	130 MMBtu/hr

2. Other Campus Natural Gas Uses

a. Miscellaneous Sources Not Used for Steam

b. Student Housing

Koch (2 boilers, 6.3 MMBtu/hr ea.)
Story (2 boilers, 6.3 MMBtu/hr ea.)
Grant Chamberlain (12 boilers, 0.594 MMBtu/hr ea.)

c. Museum of Rockies

d. Marsh Lab (2 boilers, 3.7 MMBtu/hr ea.)

e. Dairy

f. Single Family Units

g. Multifamily Units

h. Arc (2 boilers, 0.7 MMBtu/hr ea.)

3. Liquefied Petroleum Gas Combustion

B. Source Description

MSU is a public facility of higher education and many of the buildings on the MSU campus are supplied steam by the heating plant. The heating plant consists of three natural gas fired boilers to supply steam to heat the campus.

C. Permit History

MAQP #2821-00 was issued on May 9, 1994, to Montana State University (MSU) to make changes to boiler #3. MSU proposed installing a Low-NO_X burner and replacing the forced draft fan, instrumentation, and gas controls. The change in burner resulted in a decrease in potential-to-emit of NO_X emissions and an increase of CO emissions. There is expected to be no change in potential-to-emit of Particulate, SO_2, or VOC.

The heating plant was originally built in 1922. It was fueled by two coal-fired boilers. In 1958, boilers #1 and #2 were installed. In 1968, boiler #3 was installed as a replacement to an existing boiler.

MAQP #2821-00 identified only the heating plant as an emission source at MSU. However MAQP #2821-01 identifies all of the emission sources located at MSU in order to obtain synthetic minor status from the Title V permitting program.

MAQP #2821-01 established enforceable limits for NO_X emission by limiting the total amount of natural gas (1065.6 MMcf/yr) that may be burned in boiler #1, boiler #2, and boiler # 3 during a rolling twelve (12) month period. This was done to ensure that emissions from the facility are less than 100 tons/year and exempt MSU from the requirements of the Title V operating permit program.

MAQP #2821-02 authorized the installation of two new natural gas fired boilers to replace boilers #1 and #2 in the heating plant. The #1 boiler has a nominal heat input rating of 120 MMBtu/hr and is subject to the requirements of 40 CFR 60, Subpart Db. This boiler replaced the existing boiler #1 which was rated at 72 MMBtu/hr heat input. The #2 boiler has a nominal heat input rating of 60 MMBtu/hr and is subject to the requirements of 40 CFR 60, Subpart Dc. This boiler replaced the existing boiler #2 which was rated at 72 MMBtu/hr heat input. Both boilers were equipped with low NO_X burners to reduce nitrogen oxide emissions.

The installation of the new boilers resulted in a decrease in the allowable NO_X emissions from the facility; allowable emissions from the other criteria pollutants remained the same. Although the rated capacity of the new boilers is higher than the boilers being replaced, the annual natural gas combusted in the boilers is limited by the permit. Because of the increased efficiency of the new boilers and the lack of an increased heating requirement, actual emissions of particulate matter, SO_2, NO_X, CO and VOC are expected to decrease.

Boiler #1 is the primary boiler used for heating of the campus with the #2 boiler making up for additional steam demand and the #3 boiler as a backup to the #1 boiler.

After the Department issued its preliminary determination on this project, questions arose concerning the use of an alternative NO_X monitoring plan for direct compliance. Language was added to Section II.C, and Section II.D was added, clarifying the requirements. Changes were also made to the testing requirements for the new and existing boilers to be consistent with NSPS requirements and testing at similar facilities. Section II.E - Notification Requirements were also added, this section was inadvertently left out of the preliminary determination.

On June 29, 1998, the Department received a request related to the NO_X emission limit and the averaging period for the #1 boiler. In MAQP #2821-02, the NO_X limit of 0.068 lbs/MMBtu was based on the Best Available Control Technology (BACT). The averaging period was a 30-day rolling average based on the requirements of the New Source Performance Standards (NSPS) in 40 CFR 60.46b(e). The BACT NO_X limit, which is more stringent than NSPS limits, proved difficult to meet when periods of start-up and shut down are included as required by NSPS. This permitting action separated the NSPS emission limit from the state BACT limit and addressed the compliance requirements for each.

MSU performed the initial 30-day test, as required by NSPS Subpart Db, with a NO_X analyzer. The test was run in accordance with Reference Method 7e except that it was continued over a period of 30 steam generator operating days. During the performance of this initial test, MSU demonstrated compliance with the emission limit set forth in Subpart Db; however, they did not demonstrate compliance with the state BACT limit in Section II.A.1.

During the warmer months when steam demand is low at the facility, MSU typically operates the boiler only during the day. During the periods of start-up and shut down, NO_X emissions have been shown to increase; however, NSPS requires the facility to meet the emission limits at all times, including start up and shut down. While MSU can meet the NSPS limits when including the frequent start-ups and shut downs, they have expressed concern about their ability to meet the more stringent BACT limit. The state BACT limit is meant to be a limit on the boiler during normal operation and is not intended to include start up and shut down. Therefore, the permit was changed to separate the NSPS limit which is based on a 30-day rolling average from the state BACT limit which is based on a 3-hour average. The BACT-driven CO emission limits were also updated to be consistent.

This change to the permit allowed MSU to minimize costs during the retest of the boiler by performing a 3-hour test rather than a 30-day test to show compliance with the state BACT limit. The Department has determined that another 30-day test is unnecessary because the BACT limit is based on operating the boiler at its expected maximum operating capacity.

Incorporated into this action was a change to the compliance demonstration method for the boiler. The previous permit contained the option of using the proposed predictive emissions monitoring system (PEMS) to demonstrate compliance with the 30-day NSPS NO_X emissions limit. The state and MSU were told by EPA this was not allowable and that the compliance test must be performed with a continuous emission monitoring system (CEMS). While MSU still intends to operate a PEMS for the daily monitoring of NO_X emissions, the permit was updated to reflect the determination that a CEMS must be used to perform any required stack tests pursuant to 40 CFR 90.46b(e)(4). **MAQP #2821-03** replaced Permit #2821-02.

D. Current Permit Action

During a Department review, staff discovered that MAQP #2821-03 was missing the appropriate reference to regulatory authority for the certification that emissions are less than those that would require a Title V operating permit, as well as the corresponding permit analysis language pertaining to production limits.

Because MSU accepted limits in its MAQP to stay below the Title V permit threshold, the Department established such limits in the MAQP. With such limits, MSU is required to annually certify that its actual emissions are less than those that would require the source to obtain an air quality Title V operating permit. This annual certification is required to be submitted with the annual emission inventory and production and equipment information, and is required to be submitted on or before February 15th of each year. The annual certification is required by ARM 17.8.1204(3)(b) which was included as a permit condition; however, the condition lacked the appropriate rule reference. MAQP #2658-04 includes the rule reference for the certification obligation and also updates language in the permit analysis pertinent to this issue. MAQP #2821-04 replaces MAQP #2821-03.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (Department). Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

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

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).

   MSU shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation.
   (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}
11. ARM 17.8.230 Fluoride in Forage

MSU must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may 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.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, MSU 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.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.

6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall 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 as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). MSU is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.

   a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:

   b. 40 CFR 60, Subpart Db – Standard of Performance for Industrial – Commercial – Institutional Steam Generating Units. This subpart does apply to MSU because the boilers have the capability of firing fossil fuel at a heat input rate of greater than 100 million Btu per hour.

   c. 40 CFR 60, Subpart Dc – Standard of Performance for Small Industrial – Commercial – Institutional Steam Generating Units. This subpart does apply to MSU because the boilers have the capability of firing fossil fuel at a heat input rate of less than 100 million Btu per hour but greater than 10 million Btu per hour.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below:

   a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to an NESHAP Subpart as listed below:

   b. 40 CFR 63, Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources. This subpart does apply to MSU because the boilers in use are considered an area source of HAPs and are classified as Industrial, Commercial, and Institutional Boilers.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. A permit fee is not required for the current permit action because the permit action is considered an administrative permit change.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. MSU has a PTE greater than 25 tons per year of NO_X, and CO; therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. A permit application was not required for the current permit action because the permit change is considered an administrative permit change. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. An affidavit of publication of public notice was not required for the current permit action because the permit change is considered an administrative permit change.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter.

   This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving MSU of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.

15. ARM 17.8.771 Mercury Emission Standards for Mercury-Emitting Generating Units. This rule identifies mercury emission limitation requirements, mercury control strategy requirements, and application requirements for mercury-emitting generating units.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because it is not a listed source and the facility's PTE is less than 250 tons per year of any pollutant (excluding fugitive emissions).

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:

   a. PTE > 100 tons/year of any pollutant;

   b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #2821-04 for MSU, the following conclusions were made:

   a. The facility's PTE is less than 100 tons/year for any pollutant.

   b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.

   c. This source is not located in a serious PM_{10} nonattainment area.

   d. This facility is subject to current NSPS (40 CFR 60, Subpart Db and Subpart Dc).

   e. This facility is subject to current NESHAP (40 CFR 63, Subpart JJJJJJ).

   f. This source is not a Title IV affected source, or a solid waste combustion unit.

   g. This source is not an EPA designated Title V source.

   h. As allowed by ARM 17.8.1204(3), the Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's potential to emit.

i. In applying for an exemption under this section, the owner or operator of the source shall certify to the Department that the source's potential to emit, does not require the source to obtain an air quality operating permit.
ii. Any source that obtains a federally enforceable limit on potential to emit shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

MSU has taken federally enforceable permit limits to keep potential emissions below major source permitting thresholds. Therefore, the facility is not a major source and, thus a Title V operating permit is not required.

The Department determined that the annual reporting requirements contained in the permit are sufficient to satisfy this requirement.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness.

MSU shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204 (3)(b). The annual certification shall comply with requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information.

Based on these facts, the Department determined that MSU will be a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, MSU will be required to obtain a Title V Operating Permit.

III. BACT Determination

A BACT determination is required for each new or modified source. MSU shall install on the new or modified source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized.

A BACT analysis was not required for the current permit action because the current permit action is considered an administrative permit action.

IV. Emission Inventory

	Emissions (tons/year)						
Source	TSP	PM_{10}	NO_X	VOC	CO	SO_X	HAPs
Boiler #1 (120 MMBtu/hr)	--	--	--	1.49	--	--	--
Boiler #2 (60 MMBtu/hr)	--	--	--	--	--	--	--
Boiler #3 (130 MMBtu/hr)	7.3	7.3	36.23	--	26.11	0.32	--
Misc. not used for steam	0.23	0.23	1.96	0.15	0.84	0.01	--
Student Housing, Kock Boilers	0.66	0.66	5.52	0.29	1.16	0.03	--
Student Housing, Story Boilers	0.66	0.66	5.52	0.29	1.16	0.03	--
Student Housing, Grant – Chamberlain Boilers	0.37	0.37	3.11	0.16	0.65	0.02	--
ARC Boilers	0.07	0.07	0.62	0.03	0.13	--	--
Museum of the Rockies	0.16	0.16	1.32	0.07	0.28	0.01	--
Marsh Lab Boilers	0.39	0.39	3.24	0.17	0.68	0.02	--
Pavilion	0.03	0.03	0.23	0.02	0.1	--	--
Dairy	0.01	0.01	0.05	0.004	0.02	--	--
Single Family Units	0.17	0.17	1.42	0.11	0.6	0.01	--
Multifamily units	0.09	0.09	0.78	0.06	0.33	--	--
LPG Use	3.34E-03	3.34E-03	1.17E-01	4.18E-03	1.59E-02	2.01E-05	--
Misc. Chemical Usage - HAPs	--	--	--	--	--	--	3.86
Total Emissions	10.14	10.14	60.12	2.85	32.08	0.45	3.86

*Detailed Calculations are on file with the Department

V. Existing Air Quality

The existing air quality of the area is expected to be in compliance with all state and federal requirements. This permitting action will not authorize an increase in emissions from the facility. Therefore, it is not expected to result in any violations of the standard.

VI. Ambient Air Impact Analysis

The Department determined that there will be no air quality impacts from this permitting action because this permitting action is considered an administrative action. Therefore, the Department believes this action will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

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

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

VIII. Environmental Assessment

This permitting action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, an Environmental Assessment is not required.

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Date: 11/30/2016