



Montana Department of
ENVIRONMENTAL QUALITY

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November 24, 2014

Robert Johnson
Eureka Pellet Mills
P.O. Box 667
Eureka, MT 59917

Dear Mr. Johnson:

Montana Air Quality Permit #2554-05 is deemed final as of November 22, 2014, by the Department of Environmental Quality (Department). This permit is for a wood particle dryer and pelletizing plant and associated equipment. 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 Merkel
Air Permitting Program Supervisor
Air Resources Management Bureau
(406) 444-3626

Doug Kuenzli
Environmental Science Specialist
Air Resources Management Bureau
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JM:DCK
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #2554-05

Eureka Pellet Mills
P.O. Box 667
Eureka, MT 59917

November 22, 2014



MONTANA AIR QUALITY PERMIT

Issued To: Eureka Pellet Mills
P.O. Box 667
Eureka, MT 59917

MAQP# 2554-05
Administrative Amendment (AA) Request
Received: 07/30/2014
Department's Decision on AA: 11/06/2014
Permit Final: 11/22/2014
AFS#: 053-0010

An air quality permit, with conditions, is hereby granted to Eureka Pellet Mills (EPM) 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

EPM owns and operates a wood particle dryer and pelletizing plant located in the Northwest ¼ of the Southeast ¼ of Section 3, Township 36 North, Range 27 West, in Lincoln County, Montana. The facility is located on Highway 93 North, approximately two miles North-Northwest of Eureka. A complete list of the permitted equipment is contained in Section I.A of the permit analysis.

B. Current Permit Action

On July 30, 2014, the Department of Environmental Quality (Department) received notification from EPM regarding the proposed replacement of the existing burner on the MEC Sawdust Dryer. The current permit action incorporates de minimis friendly language into the MAQP which accommodates the current proposed burner replacement and provides for future like-kind burn replacements. Additionally, the current permit action updates permit language and rule references used by the Department.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Particulate matter (PM) and particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) emissions from the MEC Sawdust Dryer shall be controlled by a high efficiency cyclone and particulate matter (PM)/particulate matter with an aerodynamic diameter of ten microns or less (PM₁₀) emissions from the cyclone shall not exceed the following (ARM 17.8.752):

PM: 15.30 pounds per hour (lb/hr)
PM₁₀: 4.01 lb/hr

2. Gaseous emissions from the MEC Sawdust Dryer, as measured at the cyclone exhaust, shall not exceed the following (ARM 17.8.752):

Oxides of nitrogen (NO_x): 14.76 lb/hr
Carbon monoxide (CO): 18.81 lb/hr
Volatile organic compounds (VOC): 25.20 lb/hr

3. EPM shall be limited to 70,000 ODT of production from the MEC Sawdust Dryer per rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).
4. PM/PM₁₀ emissions from the pellet mills and pelletizer cooler shall be controlled with a cyclone (ARM 17.8.749).
5. EPM shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
6. EPM 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).
7. EPM shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.6 (ARM 17.8.749).

B. Testing Requirements

1. EPM shall test the MEC Sawdust Dryer at the cyclone exhaust for PM/PM₁₀, within 90 days of initial start-up after any burner replacement to demonstrate compliance with the requirements in Section II.A.1. The testing shall continue on an every 5-year basis or according to another testing/monitoring schedule as may be approved by the Department. Source testing shall occur while the MEC Sawdust Dryer is fired with sawdust, unless otherwise approved by the Department (ARM 17.8.105).
2. EPM shall test the MEC Sawdust Dryer at the cyclone exhaust for NO_x and CO emissions, concurrently, within 90 days of initial start-up after any burner replacement to demonstrate compliance with the NO_x and CO emission limits contained in Section II.A.2. The testing shall continue on an every 5-year basis or according to another testing/monitoring schedule as may be approved by the Department. Source testing shall occur while the MEC Sawdust Dryer is fired with sawdust, unless otherwise approved by the Department (ARM 17.8.105).
3. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
4. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. EPM 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.

Production 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 in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. EPM shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include *the addition of a new emissions unit*, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to startup 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(l)(d) (ARM 17.8.745).
3. All records compiled in accordance with the permit must be maintained by EPM as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
4. EPM shall document, by month, the ODT production from the MEC Sawdust Dryer. By the 25th day of each month, MEC shall total the ODT production from the MEC Sawdust Dryer for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.3. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
5. EPM 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 17.8.749 and ARM 17.8.1204).

D. Notification

EPM shall provide the Department with written notification within 15 days of the initial start-up date of the MEC Sawdust Dryer firing the replacement burner (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – EPM 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 (continuous emissions monitoring system (CEMS), continuous emissions rate monitoring system (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 EPM fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving EPM 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 therefore, 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, as amended by the 1991 Legislature, failure to pay the annual operation fee by EPM 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
Eureka Pellet Mills
MAQP #2554-05

I. Introduction/Process Description

A. Permitted Equipment

The facility consists of the following equipment:

1. 12 foot X 42 foot MEC Rotary Dryer (9 oven dried tons (ODT) per hour or 78,840 ODT per year)
2. Webb Burner (50 million British thermal unit per hour (MMBtu/hr))
3. Dryer Cyclone
4. Pellet Cooler Cyclone
5. Associated Equipment (i.e. Hammermill, Screens, Pelletizers, Etc.)

B. Source Description

Eureka Pellet Mills (EPM) owns and operates a wood particle dryer and pelletizing plant located in the Northwest $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Section 3, Township 36 North, Range 27 West, in Lincoln County, Montana. The facility is located on Highway 93 North, approximately two miles North-Northwest of Eureka.

The facility uses sawdust as a raw material, which is screened to separate oversized material and the fines. The fines are conveyed directly to a target box and the oversized material is passed through a hammer mill and then conveyed to the target box. From the target box, the material is passed through a triple pass rotary dryer and then to the pelletizer surge bin. The heat for the dryer is provided by the Webb burner, which can be fired on pulverized sawdust or propane. The Webb burner exhausts within the rotary dryer for material drying. The exhaust gases are routed to the dryer cyclone, which collects particulate emissions, as well as dried product from both the burner and the dryer. The entire process, from the screen through the dryer, is an enclosed process. From the surge bin, the dried material is fed to one of two pelletizers. The pelletizers can process up to seven tons of material per hour. Pelletized product is then cooled in an air cooler before being transferred to a bulk storage room. Fines from the cooling process are collected by the cooler cyclone and dumped back to the surge bin. From the storage room, the pellets are bagged in 40-pound bags.

The dryer cyclone also controls particulate emissions from the hammermill and the screens.

C. Permit History

MAQP #2554 was issued on March 14, 1989, for the construction and operation of the pellet mill. The original permit limited the operation of the facility to 20 hours per day, 4 days per week, and 36 weeks per year.

MAQP #2554-A was issued on August 17, 1990, to increase the allowable operating schedule for the facility. This permit action removed all operational limitations at the mill. Permit #2554-A replaced Permit #2554.

MAQP #2554-A2 was issued on August 20, 1991, to allow an increased particulate emission limit from the dryer. The limit was changed from 23 pounds per hour (lb/hr) to 35.75 lb/hr. The limit established during the original permit action had used an incorrect flow rate for the facility when converting the limit of 0.2 grains per dry standard cubic foot (gr/dscf) (determined by the Best Available Control Technology (BACT) analysis) to units of lb/hr. Permit #2554-A2 replaced Permit #2554-A1.

MAQP #2554-03 was issued on April 24, 1996, to establish federally enforceable permit limits for particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) emissions from the dryer cyclone. The new PM₁₀ limits reduced the facility's Potential to Emit (PTE) PM₁₀ below the Title V operating permit threshold of 100 tons per year (tpy). Limiting the PM₁₀ PTE established Eureka Pellet Mills as a "synthetic minor" source of emissions. Permit #2554-03 replaced Permit #2554-A2.

On September 25, 2006, EPM submitted a complete application for modification of MAQP #2554-03. Specifically, EPM requested to replace the existing burner for the MEC dryer with a Coen burner.

Further, the particulate matter (PM) and PM₁₀ emission limits were established from a previous source test conducted in Tennessee (1990). These emission rates were used to establish enforceable permit conditions to limit the facility's PM₁₀ emissions to less than 100 tpy. The permit application contained information in the emission inventory indicating that, after installing the new burner, the uncontrolled PM and PM₁₀ emissions would be 119 and 31.15 tpy respectively. Therefore, the facility would no longer be a synthetic minor source for PM₁₀. However the updated emission factors and the maximum capacity of the dryer (9 ODT per hour) increased volatile organic compound (VOC) emissions above 100 tpy. EPM requested an annual limit of 70,000 ODT per year to limit VOC emissions below 100 tpy. **MAQP #2554-04** replaced MAQP #2554-03.

D. Current Permit Action

On July 30, 2014, the Department of Environmental Quality (Department) received notification from EPM regarding the proposed replacement of the existing burner on the MEC dryer. The current permit action incorporates de minimis friendly language into the MAQP which accommodates the current proposed burner replacement and provides for future like-kind burn replacements. Additionally, the current permit action updates permit language and rule references used by the Department. **MAQP #2554-05** replaces MAQP #2554-04.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

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. 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).

EPM 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 (SO₂)
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide (NO₂)
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide (CO)

5. ARM 17.8.213 Ambient Air Quality Standard for Ozone (O₃)
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide (H₂S)
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter (PM)
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 PM₁₀

EPM 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 are taken to control emissions of airborne particulate matter. (2) Under this rule, EPM 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 or authorize 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. This rule incorporates, by reference, 40 Code of Federal Regulation (CFR) 60, Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because as does not meet the definition of any NSPS subpart defined in 40 CFR 60.

8. ARM 17.8.342 National Emissions Standards for Hazardous Air Pollutants. This rule incorporates, by reference, 40 Code of Federal Regulation (CFR) 63, National Emission Standards for Hazardous Air Pollutants (NESHPs) for Source Categories. This facility is not an NESHAP-affected source because as does not meet the definition of any NESHAP subpart defined in 40 CFR 63.

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 application fee was not required for the current permit action as this action is administrative action issued under ARM 17.8.764.
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 alteration to construct, alter, or use any air contaminant sources that have the PTE greater than 25 tpy of any pollutant. EPM has a PTE greater than 25 tpy of PM, PM₁₀, CO, VOC and oxides of nitrogen; 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, alteration, or use of a source. A permit application was not required for the current

permit action as this action is administrative action issued under ARM 17.8.764. (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. EPM was not required to notify the public as this permit action is an administrative amendment.

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 EPM 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 altered 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.

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 since this facility is not a listed source and the facility's PTE is below 250 tpy 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 tpy of any pollutant;
 - b. PTE > 10 tpy of any single Hazardous Air Pollutant (HAP), PTE > 25 tpy of combined HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tpy of PM₁₀ in a serious PM₁₀ 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 #2554-05 for EPM, the following conclusions were made:
 - a. The facility's PTE is less than 100 tpy for any pollutant.
 - b. The facility's PTE is less than 10 tpy for any single HAP and less than 25 tpy for combined HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is not subject to any current NSPS.

- e. This facility is not subject to any current NESHAP standards.
- f. This source is not a Title IV affected source, nor 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.

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

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

III. BACT Determination

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

A BACT determination was not required for the current permit action as the permit change is considered an administrative amendment.

IV. Emission Inventory

Source	Tons/year					
	PM	PM ₁₀	NO _x	VOC	CO	SO _x
MEC Sawdust Dryer/Burner	59.50	15.58	57.40	98.00	73.15	3.83
Pellet Cooler Cyclone	8.76	3.50	--	--	--	--
Sawdust Handling (Fugitives)	54.75	19.71	--	--	--	--
Front End Loaders (Fugitives)	2.25	1.89	--	--	--	--
Haul Trucks (Fugitives)	3.69	3.10	--	--	--	--
Total	128.95	43.78	57.40	98.00	73.15	3.83

MEC Sawdust Dryer/Burner

Maximum Capacity: 50 MMBtu/hr (Burner)
78,840 ODT/yr or 9 ODT/hr (Dryer)
Fuel Type: Sawdust or Natural Gas
Nat.Gas Heat/Value: 1020 MMBtu/MMScf
Restrictions: 70,000 ODT/yr (Dryer—Requested by Company)
Hours of operation: 8,760 hr/yr
Control Efficiency: 50% (Cyclone--PM & PM₁₀ Only)
Notes: *70,000 ODT/yr requested to maintain VOC emissions below 100 tpy
**Only Sawdust Calculations are included because they would be “worst case”

PM Emissions

Emission Factor: 3.4 lb/ODT (AP-42, Table 10.6.2-2, 6/02)
Calculations: 3.4 lb/ODT * 70,000 ODT/yr * 0.0005 ton/lb * (1.0 - 0.50) = 59.50 ton/yr
3.4 lb/ODT * 9 ODT/hr * (1.0 - 0.50) = 15.30 lb/hr

PM₁₀ Emissions

Emission Factor: 0.89 lb/ODT (AP-42, Table 10.6.2-2, 6/02)
Calculations: 0.89 lb/ODT * 70,000 ODT/yr * 0.0005 ton/lb * (1.0 - 0.50) = 15.58 ton/yr
0.89 lb/ODT * 9 ODT/hr * (1.0 - 0.50) = 4.01 lb/hr

NO_x Emissions

Emission factor: 1.64 lb/ODT (AP-42, Table 10.6.2-2, 6/02--Average of wet & dry Soft wood)
Calculations: 1.64 lb/ODT * 70,000 ODT/yr * 0.0005 ton/lb = 57.40 ton/yr
1.64 lb/ODT * 9 ODT/hr = 14.76 lb/hr

VOC Emissions

Emission factor: 2.8 lb/ODT (AP-42, Table 10.6.2-2, 6/02)
Calculations: 2.8 lb/ODT * 70,000 ODT/yr * 0.0005 ton/lb = 98 ton/yr
2.8 lb/ODT * 9 ODT/hr = 25.20 lb/hr

CO Emissions

Emission factor: 2.09 lb/ODT (AP-42, Table 10.6.2-2, 6/02--Average of wet & dry Soft wood)
Calculations: 2.09 lb/ODT * 70,000 ODT/yr * 0.0005 ton/lb = 73.15 ton/yr
2.09 lb/ODT * 9 ODT/hr = 18.81 lb/hr

SO_x Emissions

Emission factor: 0.025 lb/MMBtu (AP-42 Table 1.6-2, 9/03)
Calculations: 0.025 lb/MMBtu * 35 MMBtu/hr = 0.88 lb/hr
0.88 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 3.83 ton/yr

Pellet Cooler Cyclone

--Includes Pellet Rooms & Bagging Room
Maximum Capacity: 6.5 Ton/hr (Company Information)

PM Emissions

Emission Factor: 2.00 lb/hr (3-07-008-08, FIRE page EF-77)
Calculations: 2.00 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 8.76 ton/yr

PM₁₀ Emissions

Emission Factor: 0.80 lb/hr (3-07-008-08, FIRE page EF-77)
Calculations: 0.80 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 3.50 ton/yr

Sawdust Handling (fugitives)

--Includes storage pile, feeder, hammermill, target box, screen and feed bin conveyors
--Assumes emission factor from processes is 0.5 times that for storage pile
Process Rate: 73000 ton sawdust/yr (Source Information)
Hours of operation: 8760 hr/yr

PM Emissions

Emission Factor: 1.50 lb/ton (3-07-008-03, FIRE page EF-77)
Calculations: 73000 ton sawdust/yr * 1.50 lb/ton sawdust * 0.0005 ton/lb = 54.75 ton/yr

PM₁₀ Emissions

Emission Factor: 0.54 lb/ton (3-07-008-03, FIRE page EF-77)
Calculations: 73000 ton sawdust/yr * 0.54 lb/ton sawdust * 0.0005 ton/lb = 19.71 ton/yr

Front End Loaders (Fugitive)

Vehicle Miles Traveled: 1643 VMT/Yr (Source Information)
Control Efficiency: 50% (Water)

PM Emissions

Emission Factor: (AP-42, Section 13.2.2, 12/03)

$E = k (s/12)^a (W/3)^b$

Where:

- E = Size Specific Emission Factor (lb/VMT)
- k = Particle Sizing Constant 4.9 lb/VMT
- a = Particle Sizing Constant 0.7
- b = Particle Sizing Constant 0.45
- s = Silt Content in percent 5.0 %
- W= Average weight of vehicles in Tons 15.0 Ton

$E = 4.9 (5/12)^{0.7} (15/3)^{0.45}$
E = 5.48 lb/VMT

Calculations: 5.48 lb/VMT * 1643 VMT/Yr * 0.0005 ton/lb * (1.0 -0.5) = 2.25 ton/yr

PM₁₀ Emissions

Emission Factor: (AP-42, Section 13.2.2, 12/03)

$E = k (s/12)^a (W/3)^b$

Where:

- E = Size Specific Emission Factor (lb/VMT)
- k = Particle Sizing Constant 1.5 lb/VMT
- a = Particle Sizing Constant 0.9
- b = Particle Sizing Constant 0.45
- s = Silt Content in percent 5.0 %
- W= Average weight of vehicles in Tons 15.0 Ton

$E = 4.9 (5/12)^{0.9} (15/3)^{0.45}$
E = 4.60 lb/VMT

Calculations: 4.60 lb/VMT * 1643 VMT/Yr * 0.0005 ton/lb * (1.0 -0.5) = 1.89 ton/yr

Haul Trucks (fugitive)

--Includes Chips and Pellets

Vehicle Miles Traveled: 1643 VMT/Yr (Source Information)

PM Emissions

Emission Factor: (AP-42, Section 13.2.2, 12/03)

$E = k (s/12)^a (W/3)^b$

Where:

- E = Size Specific Emission Factor (lb/VMT)
- k = Particle Sizing Constant 4.9 lb/VMT

a = Particle Sizing Constant	0.7
b = Particle Sizing Constant	0.45
s = Silt Content in percent	5.0 %
W= Average weight of vehicles in Tons	45.0 Ton

$$E = 4.9 (5/12)^{0.7}(45/3)^{0.45}$$

$$E = 8.98 \text{ lb/VMT}$$

Calculations: $8.98 \text{ lb/VMT} * 1643 \text{ VMT/Yr} * 0.0005 \text{ ton/lb} * (1.0 - 0.5) = 3.69 \text{ ton/yr}$

PM₁₀ Emissions

Emission Factor: (AP-42, Section 13.2.2, 12/03)

$$E = k (s/12)^a(W/3)^b$$

Where:

E = Size Specific Emission Factor (lb/VMT)	
k = Particle Sizing Constant	1.5 lb/VMT
a = Particle Sizing Constant	0.9
b = Particle Sizing Constant	0.45
s = Silt Content in percent	5.0 %
W= Average weight of vehicles in Tons	45.0 Ton

$$E = 4.9 (5/12)^{0.9}(45/3)^{0.45}$$

$$E = 7.54 \text{ lb/VMT}$$

Calculations: $7.54 \text{ lb/VMT} * 1643 \text{ VMT/Yr} * 0.0005 \text{ ton/lb} * (1.0 - 0.5) = 3.10 \text{ ton/yr}$

V. Existing Air Quality

The surrounding area is listed as attainment/unclassified for the Montana and National Ambient Air Quality Standards (MAAQS and NAAQS).

VI. Ambient Air Impact Analysis

Based on the information provided and the conditions established in MAQP 2554-05, the Department determined that there will be no additional impacts from this permitting action. Therefore, the Department believes this permit 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 a private property taking and damaging assessment and determined there are no taking or damaging implications.

YES	NO	
✓		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	✓	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	✓	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	✓	4. Does the action deprive the owner of all economically viable uses of the property?
	✓	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?
	✓	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	✓	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?
	✓	7a. Is the impact of government action direct, peculiar, and significant?
	✓	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	✓	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?
	✓	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.

Analysis Prepared By: D. Kuenzli

Date: November 5, 2014