

## AIR QUALITY PERMIT

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

Permit: #2554-04  
Application Complete: 10/17/06  
Preliminary Determination Issued: 10/31/06  
Department's Decision Issued: 12/01/06  
Permit Final: 12/19/06  
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 palletizing 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 October 17, 2006, EPM submitted a complete Montana Air Quality Permit Application for a modification of Permit #2554-03. Specifically, EPM requested to replace the existing burner for the MEC dryer (9 oven-dried tons (ODT) per hour) with a 35 million British thermal unit per hour (MMBtu/hr) Coen burner. The proposed burner can be fired on wood or propane. The current permit action incorporates EPM's request into the permit. In addition, the permit was updated to reflect current Department rule references, format, and language.

### SECTION II: Conditions and Limitations

#### A. Emission Limitations

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

PM: 15.30 pounds per hour (lb/hr)  
PM<sub>10</sub>: 4.01 lb/hr

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

Oxides of nitrogen (NO<sub>x</sub>): 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/PM<sub>10</sub> 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 Coen Burner/MEC dryer at the cyclone exhaust for PM/PM<sub>10</sub>, within 90 days of start-up of the Coen Burner 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 of Environmental Quality (Department). The source testing shall occur while EPM is using sawdust as the fuel for the Coen Burner unless otherwise approved by the Department (ARM 17.8.105).
2. EPM shall test the Coen Burner/MEC dryer at the cyclone exhaust for NO<sub>x</sub> and CO emissions, concurrently, within 90 days of start-up of the Coen Burner to demonstrate compliance with the NO<sub>x</sub> 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. The source testing shall occur while EPM is using sawdust as the fuel for the Coen Burner unless otherwise approved by the Department (ARM 17.8.105 and ARM 17.8.749).
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 a 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 or the addition of a new emission unit. The notice must be submitted to the Department, 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)(d) (ARM 17.8.745).
3. All records compiled in accordance with this 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 dryer. By the 25<sup>th</sup> day of each month, MEC shall total the ODT production from the MEC 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

1. Within 15 days of the installation date of the Coen Burner, EPM shall notify the Department of the actual installation date of the burner.
2. Within 15 days of the startup date of the Coen Burner, EPM shall notify the Department of the actual startup date of the burner.

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 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. Construction Commencement – Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

Permit Analysis  
Eureka Pellet Mills  
Permit #2954-04

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. Coen Burner (35 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 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.

The facility uses sawdust as a raw material. The sawdust 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 Coen burner, which can be fired on pulverized sawdust or propane. The Coen burner exhausts into the dryer, which exhausts into 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

Permit #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.

Permit #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.

Permit alteration #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.

Permit #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 (PM<sub>10</sub>) emissions from the dryer cyclone. The new PM<sub>10</sub> limits reduced the facility's Potential to Emit (PTE) PM<sub>10</sub> below the Title V operating permit threshold of 100 tons per year. Limiting the PM<sub>10</sub> PTE established Eureka Pellet Mills as a "synthetic minor" source of emissions. Permit #2554-03 replaced Permit #2554-A2.

#### D. Current Permit Action

On September 25, 2006, EPM submitted a complete Montana Air Quality Permit Application for a modification of Permit #2554-03. Specifically, EPM requested to replace the existing burner for the MEC dryer with a Coen burner. The proposed burner can be fired on wood or propane. The current permit action incorporates EPM's request into the permit. In addition, the permit was updated to reflect current Department of Environmental Quality (Department) rule references, format, and language.

Further, the particulate matter (PM) and PM<sub>10</sub> emission limits contained in the previous permit were established from a previous source test conducted in Tennessee (1990) and were used to establish enforceable permit conditions to limit the facility's PM<sub>10</sub> emissions to less than 100 tons per year. The current permit application contained information in the emission inventory that after installing the new burner, that uncontrolled PM and PM<sub>10</sub> emissions would be 119 and 31.15 tons per year respectively. Therefore, the facility will no longer be a synthetic minor source for PM<sub>10</sub>, but using the updated emission factors and the maximum capacity of the dryer (9 ODT per hour) would increase volatile organic compound (VOC) emissions above 100 tons per year. EPM requested an annual limit of 70,000 ODT per year to limit VOC emissions below 100 tons per year. Permit #2554-04 replaces Permit #2554-03.

#### E. Additional Information

Additional information, such as applicable rules and regulations, 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
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<sub>10</sub>

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 be 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, 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 60, Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR 60.
- 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. EPM submitted the appropriate permit application fee for the current permit action.
  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 tons per year of any pollutant. EPM has a PTE greater than 25 tons per year of PM, PM<sub>10</sub>, oxides of nitrogen (NO<sub>x</sub>), VOC, and carbon monoxide (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, alteration, or use of a source. EPM submitted the required permit application for the current permit action. (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 submitted an affidavit of publication of public notice for the September 21, 2006, issue of the *Tobacco Valley News*, a newspaper of general circulation in the Town of Eureka in Lincoln County, as proof of compliance with the public notice requirements.
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 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 PM<sub>10</sub> in a serious PM<sub>10</sub> 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 Air Quality Permit #2554-04 for EPM, 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<sub>10</sub> 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 analysis was submitted by EPM in Permit Application #2554-04, addressing some available methods of controlling PM, PM<sub>10</sub>, NO<sub>x</sub>, VOC, CO, and oxides of sulfur (SO<sub>x</sub>) emissions from the proposed 35 MMBtu/hr Coen burner. The Department reviewed these methods, as well as previous BACT determinations in order to make the following BACT determination.

35 MMBtu/hr Coen burner/9 ODT/hr MEC Sawdust Dryer BACT

#### 1. PM/PM<sub>10</sub> BACT

As part of the PM/PM<sub>10</sub> BACT analysis, the following control technologies were reviewed:

- Electrostatic Precipitator (ESP)
- Wet ESP
- High Temperature Baghouse
- Electrified Filter Bed (EFB)
- Cyclone/Multiclone
- Good Combustion Practices (No Additional Controls)

Each of the control technologies would be technically feasible and are further evaluated in this BACT analysis. The following table contains the technically feasible control options and the associated efficiencies.

**Technically Feasible Control Options**

Control Technology	% Control PM/PM <sub>10</sub>	Resulting Emissions (lb/hr)
ESP	99.5%*	0.14/0.04
Wet ESP	99%	0.27/0.07
High Temperature Baghouse	98.5	0.41/0.11
EFB	70%**	8.15/2.13
Cyclone/Multiclone	50%***	13.59/3.56
Good Combustion Practices/No Additional Control	0	27.17/7.11

\* Efficiency Range of 99-99.9%

\*\*Efficiency Range of 50-90%

\*\*\*Efficiency Range of 20-70%

All of the control methods listed above are used to control PM/PM<sub>10</sub> Emissions from burners/heaters; these control options cannot be eliminated based on environmental or energy impacts.

The table below shows the cost per ton of PM/PM<sub>10</sub> reduction achieved for the control options.

**Cost Effectiveness**

Control Technology	Total Annual Cost (\$)	Resulting PM/PM <sub>10</sub> Emissions (tpy)	Cost Effectiveness (\$/ton)
ESP	714,000	1/0	6,051/23,032
Wet ESP	837,800	1/0	7,100/27,026
High Temperature Baghouse	654,500	2/1	5,500/21,817
EFB	1,630,000	36/9	18,315/74,091
Cyclone/Multiclone	N/A	60/16	N/A
Good Combustion Practices/No Additional Control	0	119/31	0

i.e. - 6,051 = 714,000 / (119-1)

N/A = Not Provided in Analysis

The cost effectiveness table above demonstrates that an ESP, a wet ESP, a high temperature baghouse, or an EFB would not be cost effective in controlling PM/PM<sub>10</sub> emissions from the burner/dryer. As demonstrated in the above table, EPM did not provide a total annual cost of using a cyclone or a multiclone. However, EPM proposed to install a high efficiency cyclone to control PM/PM<sub>10</sub> emissions from the burner/dryer. In addition, multiclones and/or high efficiency cyclones have been required on other recently permitted similar sources. Further, EPM did not provide an in-depth analysis for a multiclone, but EPM did provide information that a high efficiency cyclone has similar control efficiencies as multiclones. Therefore, as demonstrated in the above table, because a high efficiency cyclone is the most cost effective method of controlling PM/PM<sub>10</sub> emissions from the burner/dryer and because a high efficiency cyclone has similar control efficiencies as a multiclone, the Department agreed with EPM's BACT analysis and determined that using a high efficiency cyclone to control PM/PM<sub>10</sub> emissions from the burner/dryer constitutes BACT in this case.

EPM provided information that cyclones can have control efficiencies from 30% to 99%. EPM proposed using 50% control for permitting purposes and conducted their BACT analysis using the 50% control efficiency. The Department agreed with EPM's BACT analysis and determined that emission limits of 4.01/15.30 lb/hr constitutes BACT in this case. The emission limits are derived from calculations that do not consider the annual production limitations and apply a control efficiency of 50% for the use of the high efficiency cyclone.

In summary, the Department determined that using a high efficiency cyclone to meet a PM emission limit of 15.30 lb/hr and a PM<sub>10</sub> emission limit of 4.01 lb/hr constitutes BACT for the 35MMBtu/hr Coen burner and 9 ODT/hr MEC sawdust dryer.

## 2. NO<sub>x</sub> BACT

As part of the NO<sub>x</sub> BACT analysis, the following control technologies were reviewed:

- Over-fire air/staged combustion
- Low NO<sub>x</sub> burners
- Steam/water injection
- Selective non catalytic reduction (SNCR)
- Selective catalytic reduction (SCR)
- Good Combustion Practices (No Additional Controls)

Over-fire air is a staged combustion technique where all burners are operated in a fuel rich mode with additional combustion air supplied through special over-fire ports located above the primary combustion zone. EPM's analysis stated that this technique is technically infeasible for retrofit applications, such as that proposed by EPM, because over-fired air is highly dependant on design parameters of the specific burner/boiler (i.e. residence time, inside geometry, and pressure drop) to effectively reduce NO<sub>x</sub> emissions. Therefore, the Department determined that over-fired air/staged combustion would not constitute BACT for the proposed burner in this case.

Low NO<sub>x</sub> burners use modified air and fuel entry to slow the mixing rate, reduce the oxygen available for NO<sub>x</sub> formation in critical NO<sub>x</sub> formation zones, and/or reduce the amount of fuel burned at peak flame temperatures. EPM's analysis stated that low NO<sub>x</sub> burners are not available for the proposed pre-owned burner. Therefore, the Department determined that low-NO<sub>x</sub> burners are technically infeasible for the proposed burner and will not constitute BACT in this case.

Steam/water injection is used to decrease flame temperatures to reduce NO<sub>x</sub> emissions. However, the use of steam/water produces undesirable operating conditons (i.e. decreased efficiency, increased corrosion, and increased CO emissions). In addition, if the use of water/steam injection requires the installation of an injection pump and attendant piping, water/steam injection is usually cost prohibitive in reducing NO<sub>x</sub> emissions. EPM's analysis stated that applying steam/water to the burner exhaust would be counterproductive because the purpose of the proposed burner is to dry pellet furnish by providing direct heat to the dryer through the burner exhaust. Therefore, while steam/water injection may be technically feasible, the Department determined that due to the technical conflict with drying the material and the undesirable operating conditions that would result, that steam/water injection would not constitute BACT for the proposed burner in this case.

SNCR and SCR are post-combustion NO<sub>x</sub> reduction techniques in which ammonia (or urea) is injected into the flue gas to selectively reduce NO<sub>x</sub> to nitrogen and water. While SNCR/SCR has been demonstrated as technically feasible on processes such as EPM's project, SNCR/SCR has not been demonstrated to be BACT for boilers/burners less than 100 MMBtu/hr because the controls are not economically reasonable. Therefore, the Department determined that neither SNCR nor SCR will constitute BACT for the proposed burner in this case.

Good Combustion Practices (No Additional Controls) would include operating the burner/heater as it was designed to be operated. Good combustion practices is the only remaining control technology that has not been eliminated from the analysis due to either technical feasibility or economical reasonableness. Therefore, the Department determined that using good combustion practices (no additional controls) constitutes BACT for the proposed burner.

### 3. CO BACT

As part of the CO BACT analysis, the following control technologies were reviewed:

- Regenerative Thermal Oxidizer (RTO)
- Regenerative Catalytic Oxidizer (RCO)
- Over-fire air/staged combustion
- Steam/water injection
- Good Combustion Practices (No Additional Controls)

Thermal oxidation using an RTO or an RCO is a method of reducing CO emissions with post-combustion controls. However, as detailed in Section 4 of this BACT analysis, RTO and RCO was found to be cost prohibitive to control VOC emissions. Since VOC emissions (98 tons per year) from the burner/heater are greater than CO emissions (73 tons per year) from the burner/heater, RTO and RCO would also be cost prohibitive for CO.

Over-fire air is a staged combustion technique where all burners are operated in a fuel rich mode with additional combustion air supplied through special over-fire ports located above the primary combustion zone. EPM's analysis stated that this technique is technically infeasible for retrofit applications, such as that proposed by EPM, because over-fired air is highly dependant on design parameters of the specific burner/boiler (i.e. residence time, inside geometry, and pressure drop) to effectively reduce NO<sub>x</sub> emissions. While reducing NO<sub>x</sub> emissions, CO emissions are increased. This process is used to optimize combustion and find a balance between NO<sub>x</sub> and CO emission levels, but is not considered effective control technologies for CO. Therefore, the Department determined that over-fired air/staged combustion would not constitute BACT for the proposed burner in this case.

Steam/water injection is used to decrease flame temperatures to reduce NO<sub>x</sub> emissions. While reducing NO<sub>x</sub> emissions, CO emissions are increased. This process is used to optimize combustion and find a balance between NO<sub>x</sub> and CO emission levels, but is not considered effective control technologies for CO. Further, the use of steam/water produces undesirable operating conditons (i.e. decreased efficiency and increased corrosion). In addition, if the use of water/steam injection requires the installation of an injection pump and attendant piping, water/steam injection is usually cost prohibitive in reducing NO<sub>x</sub> emissions. EPM's analysis stated that applying steam/water to the burner exhaust would be counterproductive because the purpose of the proposed burner is to dry pellet furnish by providing direct heat to the dryer through the burner exhaust. Therefore, while steam/water injection may be technically feasible, the Department determined that due to the technical conflict with drying the material and the undesirable operating conditions that would result, that steam/water injection would not constitute BACT for the proposed burner in this case.

Good Combustion Practices (No Additional Controls) would include operating the burner/heater as it was designed to be operated. Good combustion practices is the only remaining control technology that has not been eliminated from the analysis due to either technical feasibility or economical reasonableness. Therefore, the Department determined that using good combustion practices (no additional controls) constitutes BACT for the proposed burner.

### 4. VOC BACT

As part of the VOC BACT analysis, the following control technologies were reviewed:

- RTO
- RCO
- Good Combustion Practices (No Additional Controls)

Each of the control technologies would be technically feasible and are further evaluated in this BACT analysis. The following table contains the technically feasible control options and the associated efficiencies.

**Technically Feasible Control Options**

Control Technology	% Control VOC	Resulting Emissions (lb/hr)
RTO	97%*	0.67
RCO	94.5%**	1.23
Good Combustion Practices/No Additional Control	0	22.37

\*Efficiency Range of 95-99%

\*\*Efficiency Range of 90-99%

All of the control methods listed above can be used to control VOC Emissions from burners/boilers; these control options cannot be eliminated based on environmental or energy impacts.

The table below shows the cost per ton of VOC reduction achieved for the control options.

**Cost Effectiveness**

Control Technology	Total Annual Cost (\$)	Resulting VOC Emissions (tpy)	Cost Effectiveness (\$/ton)
RTO	2,700,000	3	28,421
RCO	2,700,000	5	29,032
Good Combustion Practices/No Additional Control	0	98	0

i.e. -  $28,421 = 2,700,000 / (98-3)$

The cost effectiveness table above demonstrates that RTO and RCO would not be cost effective in controlling VOC emissions from the burner/dryer. In addition, for an RTO or RCO to operate properly for processes such as that proposed by EPM, a PM pre-control device (i.e. high temperature baghouse, wet ESP, etc.) would be required and the cost considerations of the PM pre-control was not considered in the cost analysis. Therefore, the cost per ton of VOC reduced is a conservatively low result.

The only remaining control technology that was not eliminated due to the cost effectiveness is good combustion practices/no additional control. Good combustion practices would include operating the burner/heater as it was designed to be operated. EPM proposed good combustion practices/no additional control as BACT for the burner/heater. The Department concurred with EPM's proposal and determined that using good combustion practices with no additional control constitutes BACT for VOC emissions from the burner/dryer in this case.

## 5. SO<sub>x</sub> BACT

EPM did not provide an in-depth analysis for SO<sub>x</sub> emissions resulting from the burner/heater. However, EPM's analysis stated that it would not be cost effective to control the small amount of SO<sub>x</sub> emissions produced by the burner/heater. EPM proposed good combustion practices/no additional controls as BACT for SO<sub>x</sub> emissions from the burner/heater. Because of the limited amount of SO<sub>x</sub> emissions (3.83 tons per year) produced by the burner/heater, the Department determined that add-on controls would be cost prohibitive. Therefore, the Department determined that good combustion practices with no additional controls will constitute BACT for SO<sub>x</sub> emissions from the burner/heater in this case.

The control options selected have controls and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

#### IV. Emission Inventory

Source	Tons/year					
	PM	PM <sub>10</sub>	NO <sub>x</sub>	VOC	CO	SO <sub>x</sub>
COEN Burner & MEC Sawdust Dryer	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				
<b>Total</b>	<b>128.95</b>	<b>43.78</b>	<b>57.40</b>	<b>98.00</b>	<b>73.15</b>	<b>3.83</b>

#### Coen Burner and MEC Sawdust Dryer

Maximum Capacity: 35 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 & PM<sub>10</sub> Only)  
Notes: \*70,000 ODT/yr requested to keep VOC emissions below 100 ton/yr  
\*\*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

#### PM<sub>10</sub> 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<sub>x</sub> 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<sub>x</sub> 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

PM<sub>10</sub> 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

PM<sub>10</sub> 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

PM<sub>10</sub> 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:  $8.98 \text{ lb/VMT} * 1643 \text{ VMT/Yr} * 0.0005 \text{ ton/lb} * (1.0 - 0.5) = 3.69 \text{ ton/yr}$

### PM<sub>10</sub> 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

$$E = 1.5 (5/12)^{0.9} (45/3)^{0.45}$$

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

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

The Department determined, based on the relatively small size of the facility and the corresponding emissions, that the impacts from this permitting action will be minor. The Department believes it 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.

## VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**Permitting and Compliance Division**  
**Air Resources Management Bureau**  
**P.O. Box 200901, Helena, Montana 59620**  
**(406) 444-3490**

**FINAL ENVIRONMENTAL ASSESSMENT (EA)**

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

*Air Quality Permit Number:* 2554-04

*Preliminary Determination Issued:* October 31, 2006

*Department Decision Issued:* December 1, 2006

*Permit Final:* December 19, 2006

1. *Legal Description of Site:* The legal description of the facility is the Northwest  $\frac{1}{4}$  of the Southeast  $\frac{1}{4}$  of Section 3, Township 36 North, Range 27 West, in Lincoln County, Montana.
2. *Description of Project:* The project would consist of replacing the existing burner for the MEC dryer with a 35 MMBtu/hr Coen burner.
3. *Objectives of Project:* The objective of the proposed project would be to allow EPM to continue producing wood pellets and continue to generate business and revenue for EPM.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the “no-action” alternative to be appropriate because EPM demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in Permit #2554-04.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats			X			Yes
B	Water Quality, Quantity, and Distribution			X			Yes
C	Geology and Soil Quality, Stability and Moisture			X			Yes
D	Vegetation Cover, Quantity, and Quality			X			Yes
E	Aesthetics				X		Yes
F	Air Quality			X			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources			X			Yes
H	Demands on Environmental Resource of Water, Air and Energy			X			Yes
I	Historical and Archaeological Sites			X			Yes
J	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats

Minor impacts to terrestrial and aquatic life and habitats would be expected from the proposed project because terrestrials would potentially use the area around the facility and because the proposed project would increase certain air pollutants from the facility. The facility would continue to emit air pollutants and corresponding deposition of pollutants would continue; however, as described in Section 7.F. of this EA, the Department determined that any impacts from deposition would be minor. In addition, construction of new buildings would not be required to replace the existing burner with a new burner. Therefore, no impacts would occur to terrestrial and aquatic life and habitats from construction. Overall, any impacts to terrestrial and aquatic life and habitats would be minor.

B. Water Quality, Quantity and Distribution

Minor impacts would be expected on water quality, quantity, and distribution from the proposed project because the proposed project would increase certain air pollutants from the facility. The facility would have no discharges into surface water. However, minor amounts of water may continue to be required to control fugitive dust emissions from the access roads and the general facility property. In addition, the facility would continue to emit air pollutants and corresponding deposition of pollutants would occur. However, as described in Section 7.F. of this EA, the Department determined that any impact resulting from the deposition of pollutants on water quality, quantity, and distribution would be minor.

Further, no direct discharges into surface water would occur and construction would not be required to replace the existing burner with a new burner. Therefore, no impacts to water quality, quantity, and distribution would occur from construction. Overall, any impacts to water quality, quantity, and distribution would be minor.

C. Geology and Soil Quality, Stability and Moisture

No impacts would occur on the geology and soil quality, stability, and moisture from construction because no construction would be required to implement the proposed project. In addition, no discharges, other than air emissions, would occur at the facility. While deposition of pollutants would continue to occur, as described in Section 7.F of this EA, the Department determined that any impacts resulting from the deposition of pollutants on the soils surrounding the site would be minor. Overall, any impacts to the geology and soil quality, stability, and moisture would be minor.

D. Vegetation Cover, Quantity, and Quality

No impacts would occur on vegetation cover, quantity, and quality from construction because no construction would be required to replace the existing burner with a new burner. In addition, no discharges, other than air emissions, would occur at the facility. The facility would continue to be a source of air pollutants and corresponding deposition of pollutants would continue. However, as described in Section 7.F of this EA, the Department determined that any impacts resulting from the deposition of pollutants on the existing vegetation cover, quantity, and quality would be minor. Overall, any impacts to vegetation cover, quantity, and quality would be minor.

E. Aesthetics

No impacts would result on the aesthetic values of the area because the proposed project would take place at an existing facility. An existing burner would simply be removed and replaced by the proposed burner.

F. Air Quality

The air quality of the area would realize minor impacts from the proposed project because the proposed project would emit the following air pollutants: PM, PM<sub>10</sub>, NO<sub>x</sub>, VOC, CO, and SO<sub>x</sub>. Air emissions from the facility would be minimized by limitations and conditions that would be included in Permit #2554-04. While deposition of pollutants would occur as a result of implementing the proposed project, the Department determined that the impacts from deposition of pollutants would be minor due to dispersion characteristics of pollutants (stack height, stack temperature, etc.), the atmosphere (wind speed, wind direction, ambient temperature, etc.), and conditions that would be placed in Permit #2554-04. The concentration of air pollutants would be relatively small, and the corresponding deposition of those air pollutants would be minor.

Since controlled emissions from the proposed project would exhibit good dispersion characteristics and would not exceed any Montana ambient air quality modeling threshold, the Department determined that controlled emissions from the source will not cause or contribute to a violation of any ambient air quality standard. Therefore, any impacts to air quality from the proposed project would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

In an effort to identify any unique endangered, fragile, or limited environmental resources in the area, the Department contacted the Montana Natural Heritage Program, Natural Resource Information System (NRIS). The NRIS search identified the following species of special concern located within the proposed project area: *Juncus covillei* var. *covillei* (Coville's Rush); *Cypripedium fasciculatum* (Clustered Lady's-slipper); *Lynx Canadensis* (Lynx); and *Salvelinus confluentus* pop. 2 (Bull Trout – Columbia River). In this case, the project area was defined by the section, township, and range of the proposed location with an additional 1-mile buffer zone.

Because new construction would not be required, because of the relatively low levels of pollutants that would be emitted, and because none of the species were identified as being within the facility boundary, the Department determined that it would be unlikely that the proposed project would impact any species of special concern and that any potential impacts would be minor.

#### H. Demands on Environmental Resource of Water, Air and Energy

The proposed project would have minor impacts on the demands for the environmental resources of air because the facility would be a source of air pollutants, and water because the facility may use water for dust suppression. Deposition of pollutants would occur as a result of operating the facility; however, as explained in Section 7.F of this EA, the Department determined that any impacts from deposition of pollutants would be minor.

The proposed project would not be expected to have impacts on the demand for the environmental resource of energy because additional power would not be required at the site. Overall, the impacts for the demands on the environmental resources of water, air, and energy would be minor.

#### I. Historical and Archaeological Sites

In an effort to identify any historical and archaeological sites near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there have not been any previously recorded historic or archaeological sites within the proposed area. In addition, SHPO records indicated that no previous cultural resource inventories have been conducted in the area. SHPO stated that there would be a low likelihood cultural properties would be impacted given the previous disturbance of the area. Therefore, the Department determined that due to the previous disturbance in the area (the facility is an existing facility) that the chance of the project impacting any cultural or historic sites would be minor.

#### J. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts on the physical and biological aspects of the human environment in the immediate area would be minor due to the relatively small size of the project. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #2554-04.

8. The following table summarizes the potential economic and social effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores				X		Yes
B	Cultural Uniqueness and Diversity				X		Yes
C	Local and State Tax Base and Tax Revenue				X		Yes
D	Agricultural or Industrial Production				X		Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities				X		Yes
G	Quantity and Distribution of Employment				X		Yes
H	Distribution of Population				X		Yes
I	Demands for Government Services			X			Yes
J	Industrial and Commercial Activity				X		Yes
K	Locally Adopted Environmental Plans and Goals				X		Yes
L	Cumulative and Secondary Impacts			X			Yes

**SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS:** The following comments have been prepared by the Department.

- A. Social Structures and Mores
- B. Cultural Uniqueness and Diversity

The proposed project would not impact the social structures and mores or cultural uniqueness and diversity in the area because the proposed project would take place at an existing facility. Further, the predominant use of the surrounding area would not change as a result of implementing the proposed project.

- C. Local and State Tax Base and Tax Revenue

The proposed project would not result in any impacts to the local and state tax base and tax revenue because no new employees would be expected as a result of implementing the proposed project. Further, the proposed project would not require new construction and typically would not require an extended period of time for completion. Therefore, no construction related jobs would be created and no corresponding impacts would result.

- D. Agricultural or Industrial Production

The proposed project would not result in any impacts to agricultural production or land use because the proposed project would operate within the existing EPM site and no new construction or land disturbance would take place. Further, the project would not increase industrial production because the proposed project would simply replace an existing dryer burner with a new dryer burner.

- E. Human Health

The proposed project would result in minor, if any, impacts to human health. As explained in Section 7.F of this EA, deposition of pollutants would occur; however, the Department determined that the proposed project would comply with all applicable air quality rules, regulations, and standards. These rules, regulations, and standards are designed to be protective of human health. Overall any impacts to human health would be minor.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed project would not impact access to recreational and wilderness activities because the facility is an existing, relatively small facility. The proposed project would not have any impacts on the quality of recreational and wilderness activities in the area because the proposed project would simply replace an existing dryer burner with a new dryer burner. Overall no impacts would occur to the access to and quality of recreational and wilderness activities as a result of implementing the proposed project.

G. Quantity and Distribution of Employment

H. Distribution of Population

The implementation of the proposed project would likely not require any new employees. Therefore, the proposed project would have little or no impact on the quantity and distribution of employment and population in the area.

I. Demands for Government Services

Government services would be required for acquiring the appropriate permits from government agencies. In addition, the permitted source of emissions would be subject to periodic inspections by government personnel. Demands for government services would be minor and consistent with current demands.

J. Industrial and Commercial Activity

No impacts would be expected on the local industrial and commercial activity because the proposed project would not represent an increase in the industrial and commercial activity in the area. The proposed project would take place at an existing facility and would simply replace an existing dryer burner with a new dryer burner.

K. Locally Adopted Environmental Plans and Goals

The Department is unaware of any locally adopted environmental plans or goals. The permit would ensure compliance with state standards and goals.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from the proposed project would result in minor, if any, impacts to the economic and social aspects of the human environment in the immediate area. Due to the relatively small size of the project, impacts to human health and government services would be minor. In addition, the Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #2554-04.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the construction and operation of a new dryer burner. Permit #2554-04 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

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