



January 15, 2015

Fodge Pulp Inc.  
P.O. Box 179  
Bonners Ferry, ID 83805

Dear Ms. Fodge:

Montana Air Quality Permit #5108-00 is deemed final as of January 15, 2015, by the Department of Environmental Quality (Department). 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,

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

Julie A. Merkel  
Air Permitting Program Supervisor  
Air Resources Management Bureau  
(406) 444-3626

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

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

JM:CH  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #5108-00

Fodge Pulp Inc.  
P.O. Box 179  
Bonners Ferry, ID 83805

January 15, 2015





3. Fodge shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.2 (ARM 17.8.752).
4. Water and/or water spray bars shall be available on site at all times and operated, as necessary, to maintain compliance with the opacity and reasonable precautions limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.749).
5. The diesel engine powering the wood/waste chipper shall be limited to 4000 hours of operation during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).
6. If the permitted equipment is used in conjunction with any other equipment owned or operated by Fodge, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).
7. Fodge shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable diesel engine (ARM 17.8.340; 40 CFR 60, Subpart IIII; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures manual (ARM 17.8.106).
2. The Department may require testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If the wood grinding plant is moved to another location, an Intent to Transfer form must be sent to the Department. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).
2. Fodge 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 not be 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 for calculating operating fees, and/or to verify compliance with permit limitations (ARM 17.8.505).

3. Fodge 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).
4. Fodge shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. The records compiled in accordance with this permit shall be maintained under Fodge control as a permanent business record for at least 5 years following the date of the measurement, must be available for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
5. Fodge shall document, by month, the operating hours of the diesel engine powering the wood chipper. By the 25<sup>th</sup> day of each month, Fodge shall total the diesel engine operating hours for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.5. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

### SECTION III. General Conditions

- A. Inspection – Fodge shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment such as continuous emissions monitoring systems (CEMS) or continuous emission rate monitoring systems (CERMS), or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Fodge fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Fodge of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for 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 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 Department personnel at the location of the permitted source.
- G. Air Quality Operation Fees – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Fodge 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).
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.
- J. Fodge shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department-approved permitting program or areas considered tribal lands.

Montana Air Quality Permit (MAQP) Analysis  
Fodge Pulp, Inc.  
MAQP #5108-00

I. Introduction/Process Description

A. Permitted Equipment

Fodge Pulp, Inc.(Fodge) owns and operates a portable wood grinding operation. Equipment includes but is not limited to the following;

- Peterson Pacific DDC 5000 wood chipper/chipper [80 tons per hour (TPH)] powered by a 1996 Caterpillar 3412E diesel-fired engine with a 1000 horsepower (hp) capacity; and
- Associated material handling and storage equipment.

B. Source Description

Fodge will use the portable wood grinding plant to chip and grind wood and wood-waste products. For a typical operational set-up, front end loaders deposit wood product and wood waste on to the chipper's in-feed belt deck, where material is feed into the chipper. Material is conveyed from the chipper for transfer.

C. 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 the 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).

Fodge 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:

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>
11. ARM 17.8.230 Fluoride in Forage

Fodge must maintain compliance with all 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 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter (PM). (2) Under this

rule, Fodge 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 or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.
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 section.
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 section.
6. ARM 17.8.340 Standards of Performance for New Stationary Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR) 60, Standards of Performance for New Stationary Sources (NSPS). Based on the information submitted by Fodge the portable wood grinding operation and associated equipment are subject to NSPS (40 CFR Part 60), as follows:

- a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:
- b. 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE). Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006 and are not fire pump engines, are subject to this subpart.

The CI ICE equipment to be used under MAQP #5108-00 are not subject to this subpart because the permitted diesel-fired engine is manufactured before April 1, 2006, and is not a fire pump engine; therefore the engine is not subject to NSPS. Engines added or replaced in the future may be subject to this subpart.

7. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below.
  - a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAP Subpart as listed below.
  - b. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary

reciprocating internal combustion engine (RICE) at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source. A RICE is considered stationary if it remains or will remain at the permitted location for more than 12 months, or a shorter period of time for an engine located at a seasonal source. A seasonal source remains at a single location on a permanent basis (at least 2 years) and operates 3 months or more each year. Based on the information submitted by Fodge, the RICE equipment to be used under this permit may be subject to this subpart because they are an area source of HAP emissions and the engine may remain at the same home pit location for more than 12 consecutive months.

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. Fodge submitted the appropriate 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.

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 pro-rate 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 facility to obtain an air quality permit or permit modification if they construct, modify, or use any air contaminant sources that have the Potential to Emit (PTE) more than 25 tons per year of any pollutant. Fodge has the PTE greater than 25 tons per year of nitrogen oxides (NO<sub>x</sub>); therefore, a 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 MAQP Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. A permit application was not required for the current permit action because the permit change is considered an administrative permit change. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Fodge submitted an affidavit of publication of public notice for the November 30, 2014, issue of *the Daily Inter Lake* a newspaper of general circulation in Flathead 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 Fodge 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 (EIS).
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of Intent to Transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) 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 Modification-- 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 it is not a listed source and the facility's PTE is less than 250 tons per year of any pollutant (excluding fugitive emissions).

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

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

- a. PTE > 100 tons/year of any pollutant;
  - b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP) , PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule, or
  - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) in a serious PM<sub>10</sub> nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (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 #5108-00 for Fodge, the following conclusions were made:
- a. The facility's PTE is less than 100 tons/year for NOx.
  - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.
  - c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
  - d. This facility is potentially subject to a current NSPS (40 CFR 60 Subpart IIII).
  - e. This facility is potentially subject to a current NESHAP standard (40 CFR 63, Subpart ZZZZ).
  - f. This source is not a Title IV affected source.
  - g. This source is not a solid waste combustion unit.
  - h. This source is not an EPA designated Title V source.

Based on these facts, the Department has determined that Fodge will be a minor source of emissions as defined under Title V. While Fodge has accepted federally-enforceable limits on annual hours of operation which result in reduced potential emissions, the primary function of these limits is to reduce potential emissions to a level that eliminates the need for the facility to quantitatively demonstrate compliance with ambient air quality standards based on Department policy. By taking limits Fodge is a true minor source with regards to Title V.

### III. BACT Determination

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

#### A. Diesel-Fired Engines

Due to the limited amount of emissions produced by the proposed diesel-fired engine used in association with MAQP #5108-00 and the lack of cost effective add-on controls, add-on controls would be cost prohibitive. Therefore, the Department determined that proper operation and maintenance with no add-on controls would constitute BACT for the diesel-fired engine.

In addition, any new diesel-fired engine would likely be required to comply with the federal engine emission limitations including, for example, EPA Tier emission standards for non-road engines (40 CFR Part 1039), NSPS emission limitations for stationary compression ignition engines (40 CFR 60, Subpart IIII), or National Emissions Standards for Hazardous Air Pollutant Sources for Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ). Therefore, the Department has determined that compliance with applicable federal standards and proper operation and maintenance of the engine constitutes BACT for this engine. BACT for SO<sub>2</sub> emissions shall be satisfied by burning only ultra-low sulfur diesel (15 ppm) as referenced in 40 CFR 89. Appropriately rated EPA Tier emission standards rated models also have low particulate, PM<sub>10</sub>, CO, and VOCs emitted, and it is economically infeasible to require pollution controls on the diesel-fired engine(s) for these additional pollutants. The control options selected have controls and control costs similar to other recently permitted similar sources and are capable of achieving the appropriate emission standards. The current proposed diesel-fired engine is certified as EPA Tier I.

#### B. Process and Fugitive Particulate Emissions

Fodge must take reasonable precautions to limit the fugitive emissions of airborne particulate matter on haul roads, access roads, parking lots, and the general plant area. Reasonable precautions include treating all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant, as necessary. Using water and/or chemical dust suppressant to comply with the reasonable precautions limitation will be considered BACT. Fodge shall also use water spray bars as necessary to maintain compliance with the opacity and reasonable precaution limitations as referenced in Section II.A.5

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

#### IV. Emission Inventory

Emission Source	Emissions Tons/Year [PTE]						
	PM	PM10	PM2.5	CO	NOx	SO2	VOC
Petersen Pacific DDC5000 Wood Grinder	1.6	0.8	0.4				
Petersen Pacific DDC5000 Material Handling	3.2	1.6	0.8				
Petersen Pacific DDC5000 1000 hp Diesel Engine	1.5	0.9	0.68		11	48	1.42
Unpaved Roadways (Haul Roads)	10.98	3.03	0.78				
<b>TOTAL EMISSIONS TPY</b>	<b>17.28</b>	<b>6.33</b>	<b>0.30</b>		<b>11</b>	<b>48</b>	<b>1.42</b>

*Emission Inventory reflects enforceable limits on hours of operation to keep allowable emissions below the Title V threshold AND 80 tpy.*

CO, carbon monoxide			
NO <sub>x</sub> , oxides of nitrogen			
PM, particulate matter			
PM <sub>10</sub> , particulate matter with an aerodynamic diameter of 10 microns or less			
PM <sub>2.5</sub> , particulate matter with an aerodynamic diameter of 2.5 microns or less			
SO <sub>2</sub> , oxides of sulfur			
TPY, tons per year			
VOC, volatile organic compounds			

Petersen  
Pacific  
DDC5000  
Grinder

Production Rate: 80 tons/hour (Design Maximum) 320000 tons/year (Maximum)

Hours of Operation: 4000 hours/year (Maximum)

Control Efficiency (Ce): 50 % [Water Application]

Power Plant: 1000 hp - 1996 Caterpillar 3412E Diesel Engine

Material Processing:

Particulate Emissions:

PM Emissions (controlled):

Emission Factor 0.02 lbs/ton processed [Department Emission Factor - Similar Source Wood Debarking]

Calculations (0.02 lbs/ton) \* (80 tons/hr) \* (50% Ce) = 0.8 lbs/hr

(0.80 lbs/hr) \* (4000 hrs/yr) \* (0.0005 tons/lb) = 1.6 TPY

PM10 Emissions

(controlled):

Emission Factor	0.01 lbs/ton processed 50% of PM is PM10]	[Assumes	
Calculations	$(0.01 \text{ lbs/ton}) * (80 \text{ tons/hr}) * (50\% \text{ Ce}) =$ $(0.40 \text{ lbs/hr}) * (4000 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$		0.4 lbs/hr 0.8 TPY

Material Handling:

Particulate Emissions:

Total Transfers: 2 Transfers [Load-in and Load-Out to Trucks]

Control Efficiency (Ce): 50 % [Water Application]

PM Emissions (controlled):

Emission Factor	0.02 lbs/ton processed - Similar Source Wood Debarking]	[Department Emission Factor	
Calculations	$(0.02 \text{ lbs/ton}) * (80 \text{ tons/hr}) * (50\% \text{ Ce}) * (2 \text{ transfers}) =$ $(1.60 \text{ lbs/hr}) * (4000 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$		1.6 lbs/hr 3.2 TPY

PM10 Emissions (controlled):

Emission Factor	0.01 lbs/ton processed 50% of PM is PM10]	[Assumes	
Calculations	$(0.01 \text{ lbs/ton}) * (80 \text{ tons/hr}) * (\% \text{ Ce}) * (2 \text{ transfers}) =$ $(0.80 \text{ lbs/hr}) * (4000 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$		0.8 lbs/hr 1.6 TPY

Diesel Generator:

Output Capacity:	1000	hp
Fuel Input:	7	MMBtu/hr
Fuel Sulfur Content (S):	0.4	Wgt. % [AP-42 App. A, page A-5; 1/95]
Hours of Operation:	4000	hours/Year

Particulate

Emissions:

PM Emissions:

Emission Factor	0.0007 lb/hp-hr [AP-42 3.4-1, 10/96 ]	
Calculations	(0.0007 lb/hp-hr) * (1000 hp) = (0.70 lbs/hr) * (4000 hrs/yr) * (0.0005 tons/lb) =	0.7 lbs/hr  1.4 TPY

PM Emissions  
(Condensable):

Emission Factor	0.0077 lb/MMBtu-hr [AP-42 3.4-2, 10/96 ]	
Calculations	(0.0077 lb/MMBtu-hr) * (7.0 MMBtu/hr) = (0.05 lbs/hr) * (4000 hrs/yr) * (0.0005 tons/lb) =	0.05 lbs/hr  0.1 TPY

PM10 Emissions:

Emission Factor	0.0573 lb/MMBtu-hr [AP-42 3.4-2, 10/96 ]	
Calculations	(0.0573 lb/MMBtu-hr) * (7.0 MMBtu/hr) = (0.40 lbs/hr) * (4000 hrs/yr) * (0.0005 tons/lb) =	0.4 lbs/hr  0.8 TPY

PM2.5 Emissions  
(Filterable):

Emission Factor	0.0479 lb/MMBtu-hr [AP-42 3.4-2, 10/96 ]	
Calculations	(0.0479 lb/MMBtu-hr) * (7.0 MMBtu/hr) = (0.34 lbs/hr) * (4000 hrs/yr) * (0.0005 tons/lb) =	0.34 lbs/hr  0.68 TPY

CO Emissions:

Emission Factor	0.0055 lb/hp-hr [AP-42 3.4-1, 10/96 ]	
Calculations	(0.0055 lb/hp-hr) * (1000 hp)	5.5

$$= (5.50 \text{ lbs/hr}) * (4000 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 11 \text{ TPY}$$

NOx Emissions:

Emission Factor 0.024 lb/hp-hr  
[AP-42 3.4-1, 10/96 ]

Calculations (0.024 lb/hp-hr) \* (1000 hp) = 24  
 \* (4000 hrs/yr) \* (0.0005 tons/lb) = 48 TPY

SO2 Emissions:

Emission Factor 0.00809 \* (S) lb/hp-hr  
[AP-42 3.4-1, 10/96 ]

Calculations (0.00809 lb/hp-hr) \* (0.4% Sulfur Content) \* (1000 hp) = 3.24 lbs/hr  
 \* (4000 hrs/yr) \* (0.0005 tons/lb) = 6.48 TPY

VOC Emissions:

Emission Factor 0.000705 lb/hp-hr  
[AP-42 3.4-1, 10/96 ]

Calculations (0.000705 lb/hp-hr) \* (1000 hp) = 0.71  
 \* (4000 hrs/yr) \* (0.0005 tons/lb) = 1.42 TPY

Unpaved Roadways

Particulate Emissions:

Emission Factor EF =  $k(s/12)^a * (W/3)^b$  [AP-42 13.2.2, 11/06]

where: EF, Emission Factor = lbs Emitted Per Vehicle Mile Traveled (VMT)  
 k, Empirical Constant PM = 4.9 [AP-42 Table 13.2.2-2, 11/06]  
 k, Empirical Constant PM10 = 1.5 [AP-42 Table 13.2.2-2, 11/06]

=		
k, Empirical Constant PM2.5	0.15	[AP-42 Table 13.2.2-2, 11/06]
=		
s, Surface Material Silt Content (%) =	7.1	[AP-42 Table 13.2.2-1, 11/06]
W, Mean Vehicle Weight (tons) =	25	[Fodge Provided Data]
a, Empirical Constant PM =	0.7	[AP-42 Table 13.2.2-2, 11/06]
a, Empirical Constant PM10 /PM2.5 =	0.9	[AP-42 Table 13.2.2-2, 11/06]
b, Empirical Constant PM - PM2.5 =	0.45	[AP-42 Table 13.2.2-2, 11/06]

PM Emissions:

Emission Factor	EF = 4.9 * (7.1/12)^0.7 * (50/3)^0.45 =	12.04 lbs/VMT	
Calculations	(12.04 lbs/VMT) * (5 miles/day) =	60.18 lbs/day	
	(60.18 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =	10.98 TPY	

PM10 Emissions:

Emission Factor	EF = 1.5 * (7.1/12)^0.9 * (50/3)^0.45 =	3.32 lbs/VMT	
Calculations	(3.32 lbs/VMT) * (5 miles/day) =	16.5868 lbs/day	
	(16.59 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =	3.03 TPY	

PM2.5 Emissions:

Emission Factor	EF = 0.15 * (7.1/12)^0.9 *	0.33 lbs/VMT	
	(50/3)^0.45 =		
Calculations	(0.33 lbs/VMT) * (5 miles/day) =		1.65868 lbs/day
		(1.66 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =	0.30 TPY

V. Existing Air Quality

The initial location of this portable operation is to be located in an area designated as nonattainment for PM<sub>10</sub> and attainment or unclassified for all other National Ambient Air Quality Standards.

The operating conditions contained in MAQP #5108-00 and Addendum #1 will minimize any potential impact on the nonattainment areas and will protect the national ambient air quality standards (NAAQS).

VI. Air Quality Impacts

MAQP #5108-00 regulates the wood grinding plant while operating at any location within Montana excluding those counties that have a Department-approved permitting program. In the view of the Department, the amount of controlled emissions generated by this facility will not exceed any set ambient standard. In addition, this source is portable and any air quality impacts will be minimal and short-lived. If the source locates and operates in or within 10 km of a PM<sub>10</sub> nonattainment area, Fodge will be required to operate in accordance with Addendum #1 and MAQP #5108-00, which includes more stringent limits and conditions to ensure that the proposed operation does not result in additional degradation of air quality in the affected nonattainment area. A more detailed discussion and analysis of ambient impacts from operations locating in or within 10 km of certain PM<sub>10</sub> nonattainment areas is contained in the Addendum Analysis to Addendum #1 and MAQP #5108-00.

VII. Ambient Air Quality Impacts

The Department has determined that impacts from this permitting action are expected to be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VIII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted the following private property taking and damaging assessment.

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

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

IX. Environmental Assessment

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

Analysis Prepared By: Craig Henrikson  
November 26, 2014

**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:* Fodge Pulp, Inc.  
P.O. Box 179  
Bonners Ferry, ID 83805

*Montana Air Quality Permit Number (MAQP):* 5108-00

*Preliminary Determination Issued:* December 12, 2014

*Department Decision Issued:* December 30, 2014

*Permit Final:* January 15, 2015

1. *Legal Description of Site:* Fodge Pulp, Inc.'s (Fodge) wood processing is proposing a facility located in Section 7, Township 30 North, Range 20 West, near Columbia Falls, Montana, in Flathead County.
2. *Description of Project:* Fodge proposes to operate a wood chipper with 1000 brake-horsepower capacity diesel-fired engine and associated equipment. The project would initially be operated on the existing Plum Creek manufacturing site.
3. *Objectives of Project:* The objective of the proposed facility is to chip wood products.
4. *Alternatives Considered:* In addition to the proposed action, the Department of Environmental Quality (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 Fodge 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 Best Available Control Technology (BACT) analysis, is included in MAQP #5108-00.
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

The proposed project would occur at an existing industrial site. Additionally, minimal emissions would occur because the chipper would utilize reasonable precautions to minimize particulate. The Department has determined that any impacts from emissions or deposition of pollutants would be minor due to the dispersion characteristics of the pollutants, the atmosphere, and because the project would initially be located at an existing industrial site.

B. Water Quality, Quantity and Distribution

The proposed project would be expected to have only minor impacts on water quality, quantity, and distribution in the project area. The project would not have any discharges into surface water or at the facility. Water would still be required for continued fugitive dust control of the access roads and the general facility property.

C. Geology and Soil Quality, Stability and Moisture

The proposed facility modification would not be expected to have any impact on geology and soil quality, stability, and moisture because the proposed project would be located on the site of an existing facility. No impacts to the geology and soil quality, stability, and moisture would occur due to the facility operation.

D. Vegetation Cover, Quantity, and Quality

The project would not likely have any effect on the local vegetation.

E. Aesthetics

The proposed project would not have any effect on the local aesthetics. Since the proposed operation would be located at an existing industrial site, adding a wood chipper would not be expected to have an impact.

F. Air Quality

Emissions of air pollutants would increase as a result of the permit action; however, MAQP #5108-00 contain conditions limiting opacity and minimize airborne dust through the use of water or chemical dust suppressants and to operate pollution control equipment.

The initial location of this portable operation is to be located in an area designated as nonattainment for PM<sub>10</sub> and attainment or unclassified for all other National Ambient Air Quality Standards.

The operating conditions contained in MAQP #5108-00 and Addendum #1 will minimize any potential impact on the nonattainment areas and will protect the national ambient air quality standards (NAAQS) and therefore the proposed project could result in a minor impact.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The proposed project would not have any impacts on unique endangered, fragile, or limited environmental resources because the proposed operation would be located at an existing industrial site. The Department believes that no impacts due to the relatively small amount of the above listed pollutants emitted, dispersion characteristics of the pollutants and the atmosphere, and conditions placed in MAQP #5108-00, including, but not limited to, BACT requirements discussed in Section III of the permit analysis for this permit.

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

The proposed project would have a minor impact on environmental resources of water, air, and energy. Water may be required to continue to control dust from the access roads and overall plant area. The addition of a wood chipper to the existing industrial site would provide minimal emissions increase. The Department has determined that any impacts from emissions or deposition of pollutants would be minor due to the dispersion characteristics of the pollutants, the atmosphere, and the conditions contained in MAQP #5108-00.

I. Historical and Archaeological Sites

Since the proposed project would be located at an existing industrial site, no impacts upon historical or archaeological sites would be expected as a result of this permitting action.

J. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts from this project on the physical and biological environment in the immediate area would be minor due to the relatively small size and potential environmental impact from all operations at the site. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in MAQP #5108-00.

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

The proposed project would cause minor, if any, impacts disruptions to native or traditional lifestyles or communities (social structures or mores) in the area because the proposed project occurs at an existing facility. Further, the proposed project would require no additional permanent employees on site, and would not result in any new people to the area for permanent employment purposes; thereby, having little if any impact on the social and economic resources of the area.

Additional activity (vehicle traffic, construction equipment, etc.) may be noticeable during project operation. Overall, any impacts to the social structures and mores in the area would be minor.

B. Cultural Uniqueness and Diversity

The proposed project would not cause any impacts or disruptions to native or traditional lifestyles or communities (cultural uniqueness and diversity) in the area because the proposed project would occur at an existing facility. Further, the continued operation would require no permanent employees on site, and would not result in any, or very little, immigration of new people to the area for permanent employment purposes; thereby, having little, if any, impact on the social and economic resources of the area. .

C. Local and State Tax Base and Tax Revenue

The proposed project would result in only minor impacts to the local and state tax base and tax revenue because the small scope of the proposed project.

D. Agricultural or Industrial Production

The proposed project would have minor impacts to industrial production because the proposed project would diversify the product mix provided by the facility. Since the proposed project would be located on an existing industrial site, no impact on agricultural production would occur.

While emissions of air pollutants and corresponding deposition of pollutants would occur, the Department determined that the chance of deposition of pollutants impacting agricultural or industrial production in the area surrounding the site would be minor.

E. Human Health

The proposed project would result in minor, if any, impacts to human health. 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 public health would be minor.

F. Access to and Quality of Recreational and Wilderness Activities

The project would have no impacts on the quality of recreational and wilderness activities in the area because the proposed project would operate at an existing industrial site and would not result in additional impacts. Overall any impacts to the access and quality of recreational and wilderness activities in the area would not occur.

G. Quantity and Distribution of Employment

The proposed project would have minor, if any, impacts on the quantity and distribution of employment because no permanent employees would be hired for the proposed project.

H. Distribution of Population

The proposed project would have minor, if any, impacts on the distribution of population in the area because the proposed project would be located on an existing

industrial site and not significantly increase production, and the proposed project would not likely require a permanent employee to operate the facility. Therefore, no people would be moving to the area for employment opportunities.

I. Demands for Government Services

There would be minor impacts on the demands for government services because additional time would be required by government agencies to issue MAQP #5108-00 and to assure compliance with applicable rules, standards, and conditions that would be contained in those permits. Overall, any demands for government services to regulate the facility or activities associated with the facility would be minor due to the relatively small size of the facility expansion.

J. Industrial and Commercial Activity

Only minor impacts would be expected on the local industrial and commercial activity because the proposed project would represent only a minor increase in the industrial and commercial activity in the area. The proposed project would be relatively small and would take place at an existing industrial site. Overall, any impacts to the local industrial and commercial activity of the area would be minor.

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. The state standards would protect the site and the environment surrounding the site.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from this project would result in minor impacts to the economic and social aspects of the human environment in the immediate area. Due to the relatively small size of the proposed project, the industrial production, employment, and tax revenue (etc.) changes resulting from the proposed project 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 MAQP #5108-00.

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

The current permitting action is for a wood chipper to process log material. MAQP #5108-00 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.

EA prepared by: Craig Henrikson  
Date: 12/10/2014

Addendum #1  
Fodge Pulp Inc.  
Montana Air Quality Permit (MAQP) #5108-00

An addendum to MAQP #5108-00 is issued to Fodge Pulp Inc (Fodge), pursuant to Section 75-2-204 and 75-2-211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.765, as amended, for the following:

I. Permitted Equipment

Addendum #1 and MAQP #5108-00 allow for the operation of a portable wood-grinding plant to be located in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM<sub>10</sub>) nonattainment areas including, but not limited to: Libby, Thompson Falls, Kalispell, Whitefish, Columbia Falls, and Butte. Additional seasonal and site restrictions apply. The portable wood-grinding plant incorporates a wood chipper/chipper powered by a 1000 brake-horsepower (bhp) capacity diesel-fired engine, and associated equipment.

II. Seasonal and Site Restrictions - Winter and Summer Seasons

MAQP # 5108-00 and Addendum #1 apply while operating at any location in or within 10 km of certain PM<sub>10</sub> nonattainment areas. Additionally, seasonal and site restrictions apply to the facility as follows:

- A. Winter Season (October 1-March 31). During the winter season, the only location(s) in or within 10 km of certain PM<sub>10</sub> nonattainment area(s) where Fodge may operate are:
1. Plum Creek Site: Section 7, Township 30 North, Range 20 West, Flathead County, MT (Columbia Falls PM<sub>10</sub> nonattainment area).
  2. Any other site in or within 10 km of certain PM<sub>10</sub> nonattainment areas that may be approved, in writing, by the Department of Environmental Quality (Department).
- B. Summer Season (April 1-September 30). Fodge may operate at any location in or within 10 km of the Libby, Thompson Falls, Kalispell, Whitefish, Columbia Falls, and Butte PM<sub>10</sub> nonattainment areas.
- C. Fodge shall comply with the limitations and conditions contained in Addendum #1 and MAQP #5108-00 while operating in or within 10 km of any of the previously listed PM<sub>10</sub> nonattainment areas. MAQP #5108-00 and Addendum #1 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum #1 at any time based on local conditions of any future site. These conditions may include, but are not limited to, local terrain, meteorological conditions, proximity to residences or other businesses, etc.

### III. Limitations and Conditions

#### A. Operational and Emission Limitations: Winter Season (October 1 – March 31)

1. All visible emissions from the portable wood-grinding plant and associated equipment may not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
2. Water and water spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitations in Section III.A.1 (ARM 17.8.752).
3. Fodge shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property any visible fugitive emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
4. Fodge shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 10% opacity limitation in Section III.A.3 (ARM 17.8.749).
5. Wood/wood-waste grinding production shall not exceed 1,920 tons per day (ARM 17.8.749).

#### B. Operational and Emission Limitations: Summer Season (April 1 – September 30)

1. All visible emissions from the portable wood-grinding plant and associated equipment may not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
2. Water and water spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitations in Section III.A.1 (ARM 17.8.752).
3. Fodge shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property any visible fugitive emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
4. Fodge shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 10% opacity limitation in Section II.A.3 (ARM 17.8.749).
5. Wood/wood-waste grinding production from shall not exceed 1,920 tons per day (ARM 17.8.749).

C. Operational Reporting Requirements

1. If this wood chipping plant is moved to another nonattainment location, an Intent to Transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).
2. Production information for the sites covered by this addendum must be maintained for five years and submitted to the Department upon request. The information must include (ARM 17.8.749):
  - a. Daily tons wood/waste-wood grinding production from the Peterson Pacific DDC5000 and at each site (including amount of re-circulated/rerun material). Fodge shall document, by day, the total wood waste- production. Fodge shall sum the total wood-waste production for the previous day to demonstrate compliance with the limitations in Sections III.A.5 and III.B.5.
  - b. Daily tons of bulk material loaded at each site (production).
  - c. Daily hours of operation at each site.
  - d. Fugitive dust information consisting of the daily total miles driven on unpaved roads within the operating site for all plant vehicles.

Addendum #1 Analysis  
Fodge Pulp, Inc.  
Montana Air Quality Permit (MAQP) #5108-00

I. Permitted Equipment:

Fodge Pulp, Inc (Fodge) owns and operates a portable wood-grinding plant to be operated at various locations within Montana. Equipment used at this facility includes, but is not limited to:

- Peterson Pacific DDC 5000 wood chipper/chipper [80 tons per hour (TPH)] powered by a 1996 Caterpillar 3412E diesel-fired engine with a 1000 horsepower (hp) capacity; and
- Associated material handling and storage equipment.

II. Source Description

Fodge will use the portable wood grinding plant to chip and grind wood and wood-waste products for various purposes. For a typical operational set-up, front end loaders deposit wood product and wood waste on to the chipper's in-feed belt deck, where material is feed into the chipper. Material is conveyed from the chipper to a chip truck for product hauling.

III. Applicable Rules and Regulations

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

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

- A. ARM 17.8.749 Conditions for Issuance 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.
- B. 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. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.

C. ARM 17.8.765 Transfer of Permit. An air quality permit may be transferred from one location to another if:

1. Written notice of intent to transfer location and proof of public notice are sent to the Department;
2. The source will operate in the new location for a period of less than 1 year; and
3. The source will not have any significant impact on any nonattainment area or any Class I area.

Fodge shall submit proof of compliance with the transfer and public notice requirements when Fodge transfers to any of the locations covered by this Addendum and will only be allowed to stay in the new location for a period of less than 1 year. The conditions and limitations contained in Addendum #1 and MAQP #5108-00 will prevent Fodge from having a significant impact on certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas.

#### IV. Emission Inventory

Winter Season October 1 – March 31							
Emission Source <sup>(a)</sup>	Emissions Lbs/Day						
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	NO <sub>x</sub>	SO <sub>2</sub>	VOC
Petersen Pacific DDC5000 Wood Chipper	19.2	9.6					
Petersen Pacific DDC5000 Material Handling	38.4	19.2					
Petersen Pacific DDC5000 1000 hp Diesel Engine	16.8	10.8	8.05	132	576	77.66	16.92
Unpaved Roadways (Haul Roads)	60.18	16.59	0.3				
<b>Total Emissions</b>	<b>134.58</b>	<b>56.19</b>	<b>8.35</b>	<b>132</b>	<b>576</b>	<b>77.66</b>	<b>16.92</b>

Summer Season April 1 – September 30							
Emission Source	Emissions Lbs/Day						
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	NO <sub>x</sub>	SO <sub>2</sub>	VOC
Petersen Pacific DDC5000 Wood Chipper	19.2	9.6					
Petersen Pacific DDC5000 Material Handling	38.4	19.2					
Petersen Pacific DDC5000 1000 hp Diesel Engine	16.8	10.8	8.05	132	576	77.66	16.92
Unpaved Roadways (Haul Roads)	60.18	16.59	0.3				
<b>Total Emissions</b>	<b>134.58</b>	<b>56.19</b>	<b>8.35</b>	<b>132</b>	<b>576</b>	<b>77.66</b>	<b>16.92</b>

a. Emission Inventory reflects an enforceable limits on hours of operation to maintain a PM<sub>10</sub> emission rate of less than 82 pounds per day (lb/day) for determining nonattainment limits. As the chipper is relatively small, no hourly limits were necessary below the design production rates.

CO, carbon monoxide

NO<sub>x</sub>, oxides of nitrogen

PM, particulate matter

PM<sub>10</sub>, particulate matter with an aerodynamic diameter of 10 microns or less

PM<sub>2.5</sub>, particulate matter with an aerodynamic diameter of 2.5 microns or less

SO<sub>2</sub>, oxides of sulfur

TPY, tons per year

VOC, volatile organic compounds

**Petersen Pacific DDC5000 Chipper**

Production Rate: 80 tons/hour (Design Maximum) 1920 tons/day  
 Hours of Operation: 24 hours/day (Maximum Allowable)  
 Control Efficiency (C<sub>e</sub>): 50 % [Water Application]  
 Power Plant:: 1000 hp - 1996 Caterpillar 3412E Diesel Engine

**Material Processing:**

**Particulate Emissions:**

PM Emissions (controlled):

Emission Factor 0.02 lbs/ton processed [Department Emission Factor - Similar Source Wood Debarking]  
 Calculations (0.02 lbs/ton) \* (80 tons/hr) \* (50% C<sub>e</sub>) = 0.80 lbs/hr  
 (0.80 lbs/hr) \* (24 hrs/day) = 19.2 lbs/day

PM<sub>10</sub> Emissions (controlled):

Emission Factor 0.01 lbs/ton processed [Assumes 50% of PM is PM<sub>10</sub>]  
 Calculations (0.01 lbs/ton) \* (80 tons/hr) \* (% C<sub>e</sub>) = 0.40 lbs/hr  
 (0.40 lbs/hr) \* (24 hrs/day) = 9.6 lbs/day

**Material Handling:**

Total Transfers: 2 Transfers [Load-in and Load-Out to Trucks]  
 Control Efficiency (C<sub>e</sub>): 50 % [Water Application]

**Particulate Emissions:**

PM Emissions (controlled):

Emission Factor 0.02 lbs/ton processed [Department Emission Factor - Similar Source Wood Debarking]  
 Calculations (0.02 lbs/ton) \* (80 tons/hr) \* (50% C<sub>e</sub>) \* (2 Transfers) = 1.60 lbs/hr  
 (1.60 lbs/hr) \* (24 hrs/day) = 38.4 lbs/day

PM<sub>10</sub> Emissions (controlled):

Emission Factor 0.01 lbs/ton processed [Assumes 50% of PM is PM<sub>10</sub>]  
 Calculations (0.01 lbs/ton) \* (80 tons/hr) \* (50% C<sub>e</sub>) \* (2 Transfers) = 0.80 lbs/hr  
 (0.80 lbs/hr) \* (24 hrs/day) = 19.2 lbs/day

**Diesel Generator:**

Output Capacity: 1000 hp  
 Fuel Input: 7.0 MMBtu/hr  
 Fuel Sulfur Content (S): 0.4 Wgt. % [AP-42 App. A, page A-5; 1/95]  
 Hours of Operation: 24 hours/day

**Particulate Emissions:**

Emission Factor 0.0007 lb/hp-hr [AP-42 3.4-1, 10/96 ]  
 Calculations (0.0007 lb/hp-hr) \* (1000 hp) = 0.70 lbs/hr  
 (0.70 lbs/hr) \* (24 hrs/day) = 16.8 lbs/day

PM Emissions (Condensable):

Emission Factor 0.0077 lb/MMBtu-hr [AP-42 3.4-2, 10/96 ]

Calculations	$(0.0077 \text{ lb/MMBtu-hr}) * (7.0 \text{ MMBtu/hr}) =$	0.05 lbs/hr
	$(0.05 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	1.2 lbs/day

**PM<sub>10</sub> Emissions:**

Emission Factor	0.0573 lb/MMBtu-hr [AP-42 3.4-2, 10/96 ]	
Calculations	$(0.0573 \text{ lb/MMBtu-hr}) * (7.0 \text{ MMBtu/hr}) =$	0.40 lbs/hr
	$(0.40 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	9.6 lbs/day

**PM<sub>2.5</sub> Emissions (Filterable):**

Emission Factor	0.0479 lb/MMBtu-hr [AP-42 3.4-2, 10/96 ]	
Calculations	$(0.0479 \text{ lb/MMBtu-hr}) * (7.0 \text{ MMBtu/hr}) =$	0.34 lbs/hr
	$(0.34 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	8.16 lbs/day

**CO Emissions:**

Emission Factor	0.0055 lb/hp-hr [AP-42 3.4-1, 10/96 ]	
Calculations	$(0.0055 \text{ lb/hp-hr}) * (1000 \text{ hp}) =$	5.50 lbs/hr
	$(5.50 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	132 lbs/day

**NO<sub>x</sub> Emissions:**

Emission Factor	0.024 lb/hp-hr [AP-42 3.4-1, 10/96 ]	
Calculations	$(0.024 \text{ lb/hp-hr}) * (1000 \text{ hp}) =$	24.00 lbs/hr
	$(24.00 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	576 lbs/day

**SO<sub>2</sub> Emissions:**

Emission Factor	0.00809 * (S) lb/hp-hr [AP-42 3.4-1, 10/96 ]	
Calculations	$(0.00809 \text{ lb/hp-hr}) * (0.4\% \text{ Sulfur Content}) * (1000 \text{ hp}) =$	3.24 lbs/hr
	$(3.24 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	77.76 lbs/day

**VOC Emissions:**

Emission Factor	0.000705 lb/hp-hr [AP-42 3.4-1, 10/96 ]	
Calculations	$(0.000705 \text{ lb/hp-hr}) * (1000 \text{ hp}) =$	0.71 lbs/hr
	$(0.71 \text{ lbs/hr}) * (24 \text{ hrs/day}) =$	17.04 lbs/day

**V. Existing Air Quality**

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for PM<sub>10</sub>. Due to exceedances of the national standards for PM<sub>10</sub>, the cities of Kalispell (and the nearby Fodge area), Columbia Falls, Butte, Whitefish, Libby, Missoula, and Thompson Falls were designated by EPA as nonattainment for PM<sub>10</sub>. As a result of this designation, EPA required the Department and the City-County Health Departments to submit PM<sub>10</sub> State Implementation Plans (SIP). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies determined these sources to be the major contributors to PM<sub>10</sub> emissions.

MAQP # 5108-00 and Addendum #1 are for a portable wood/wood-waste grinding plant to be located in or within 10 kilometers (km) of certain PM<sub>10</sub> nonattainment areas. The more stringent operating conditions contained in Addendum #1 will minimize any potential impact on the nonattainment areas and will protect the national ambient air quality

standards. Also, this facility is a portable source that would be expected to operate on an intermittent and temporary basis and any effects on air quality would be expected to be minor and short-lived.

#### VI. Air Quality Impacts

MAQP #5108-00 and Addendum #1 will cover the operations of this portable wood grinding process while operating at any location within Montana, excluding those counties that have a Department approved permitting program and those areas that are tribal lands.

Addendum #1 will cover the operations of this portable wood grinding process, while operating in or within 10 km of the Libby PM<sub>10</sub> nonattainment area (specific site during the winter months (October 1 through March 31). Additionally, the facility will also be allowed to operate in or within 10 km of PM<sub>10</sub> nonattainment areas during the summer months (April 1 through September 30).

#### VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted the following private property taking and damaging assessment (see Section VIII of the Permit Analysis for MAQP #5108-00) and determined there are no taking or damaging implications.

#### VIII. Environmental Assessment

See the Permit Analysis for MAQP #5108-00 for the environmental assessment which is also applicable here.

Addendum Analysis Prepared by: Craig Henrikson  
Date: December 4, 2014