

## AIR QUALITY PERMIT

Issued To: Johnson Brothers Contracting, Inc.  
3757 North Reserve Street  
Missoula, MT 59808

Permit #3375-00  
Application Complete: 1/11/05  
Preliminary Determination Issued: 2/17/05  
Department Decision Issued: 3/07/05  
Permit Final: 3/23/05  
AFS #777-3375

An air quality permit, with conditions, is hereby granted to Johnson Brothers Contracting, Inc. (Johnson), pursuant to Sections 75-2-204 and 211, Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

### Section I: Permitted Facilities

#### A. Permitted Equipment

Johnson operates a portable wood/biomass grinding facility at various locations throughout Montana. A complete list of the permitted equipment is contained in Section I.A of the Permit Analysis.

#### B. Plant Location

Johnson operates a portable wood/biomass tub grinding facility that will operate at Section 2, Township 20 North, and Range 4 East, in Cascade County, Montana. However, Permit #3375-00 applies while operating at any location in Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program, those areas considered tribal lands, or those areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* Johnson will be required to obtain an addendum to this air quality permit to operate at locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas.

### Section II: Limitations and Conditions

#### A. Operational Limitations and Conditions

1. Johnson shall not cause or authorize to be discharged into the atmosphere from the Vermeer wood/biomass tub grinder and any other associated equipment any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 and ARM 17.8.752).
2. Johnson shall not cause or authorize to be discharged into the atmosphere from any street, road, or parking lot any visible fugitive emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.308 and ARM 17.8.752).
3. Johnson 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.2 (ARM 17.8.749).
4. Wood/biomass grinding production from the facility shall be limited to 175,200

tons during any rolling 12-month time period (ARM 17.8.749).

5. Johnson shall not operate more than one diesel engine/generator at any given time and the maximum rated design capacity of the engine/generator shall not exceed 525 horsepower (hp) (ARM 17.8.749).
6. If the permitted equipment is used in conjunction with any other equipment owned or operated by Johnson, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons of emissions during any rolling 12-month time period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

B. Testing Requirements

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

C. Operational Reporting Requirements

1. If this portable wood/biomass tub 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 17.8.765).
2. Johnson shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. All records compiled in accordance with this permit shall be maintained by Johnson as a permanent business record for at least 5 years following the date of the measurement, must be submitted to the Department upon request, and must be available at the plant site for inspection by the Department (ARM 17.8.749).
3. Johnson 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 most recent emission inventory report and sources identified in Section I.A of 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 units as required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

4. Johnson 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).

5. Johnson shall document, by month, the total wood/biomass grinding production for the facility. By the 25th day of each month, Johnson shall calculate the asphalt production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.4. A written report of the compliance verification shall be submitted along with the annual emission inventory (ARM 17.8.749).

Section III: General Conditions

- A. Inspection - Johnson 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 (CEMS, 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 Johnson fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving Johnson 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 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(1)(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. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Johnson 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).

- 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. Johnson shall comply with the conditions contained in this permit while operating at any location in Montana, except within those areas having a Department-approved permitting program.

PERMIT ANALYSIS  
Johnson Brothers Contracting, Inc.  
Permit Number 3375-00

I. Introduction/Process Description

A. Permitted Equipment

Johnson Brothers Contracting, Inc. (Johnson) owns and operates a portable wood/biomass grinding facility consisting of a portable Vermeer wood tub grinder (up to 20 tons/hour), a diesel generator (up to 525 horsepower (hp)), and associated equipment. The facility will initially locate at the NE¼ of Section 2, Township 20 North, and Range 4 East, in Cascade County, Montana. Permit #3375-00 will apply to the source while operating at any location in Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program, those areas considered tribal lands, or those areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* Johnson will be required to obtain an addendum to this air quality permit to operate at locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas.

B. Process Description

Johnson proposes to use this wood/biomass grinding facility and associated equipment to grind wood/biomass in the transformation/disposal of wood/biomass piles. For a typical operational set-up, piles containing wood/biomass waste material are loaded via an excavator arm into the wood grinder. The material is ground up and then conveyed to a haul truck for transport and disposal.

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 locations 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 is a list of applicable definitions used in this subchapter, 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).

Johnson shall comply with all 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 which, without resulting in reduction in 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 that a public nuisance is created.

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

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
5. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>

Johnson must comply 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 (PM). (2) Under this rule, Johnson shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne PM.
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 PM caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Processes. This rule requires that no person shall cause or allow to be discharged into the atmosphere PM 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 truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.
7. 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). This facility is not an affected source because it does not meet the definition of an affected facility for 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 Johnson 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. Johnson submitted the required 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. This 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 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 alteration to construct, alter, or use any asphalt plant, crusher, or screen that has the Potential to Emit (PTE) greater than 15 tons per year of any pollutant. Johnson has a PTE greater than 15 tons per year of total oxides of nitrogen (NO<sub>x</sub>) 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, modification, or use of a source. Johnson 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. Johnson submitted an affidavit of publication of public notice for the January 12, 2005, issue of the *Great Falls Tribune*, a newspaper of general circulation in the Town of Great Falls in Cascade 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 Best Available Control Technology (BACT) shall be utilized. The required BACT analysis is included in Section IV 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 Johnson 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 Johnson, 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 Modifications-- Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because it is not a listed source and does not have a PTE greater than 250 tons per year (excluding fugitive emissions) of any air pollutant.

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.
  - 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 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 Air Quality Permit #3375-00 for the Johnson facility, the following conclusions were made:
  - a. The facility's permitted 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 of 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 NESHAP standards.
  - e. The facility is not currently subject to any NSPS 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.

Based on these facts, the Department has determined that Johnson will be a minor source of emissions as defined under Title V.

### III. Emission Inventory

| Source                          | Tons/Year    |                  |                 |             |              |                 |
|---------------------------------|--------------|------------------|-----------------|-------------|--------------|-----------------|
|                                 | PM           | PM <sub>10</sub> | NO <sub>x</sub> | VOC         | CO           | SO <sub>x</sub> |
| Wood Grinder (up to 20 TPH)     | 0.88         | 0.44             |                 |             |              |                 |
| Material Transfer (1 Transfers) | 0.88         | 0.44             |                 |             |              |                 |
| Pile Forming (1 Pile)           | 0.88         | 0.44             |                 |             |              |                 |
| Bulk Loading (1 Load)           | 0.88         | 0.44             |                 |             |              |                 |
| Diesel Generator (up to 525 HP) | 5.06         | 5.06             | 71.28           | 5.68        | 15.36        | 4.71            |
| Haul Roads                      | 2.74         | 1.23             |                 |             |              |                 |
| <b>Total</b>                    | <b>11.30</b> | <b>8.04</b>      | <b>71.28</b>    | <b>5.68</b> | <b>15.36</b> | <b>4.71</b>     |

- A complete Emission Inventory for Permit #3375-00 is on file with the Department.

#### IV. BACT Analysis

A BACT determination is required for any new or altered source. Johnson shall install on the new or altered source the maximum air pollution control capability that is technologically practicable and economically feasible, except that BACT shall be used.

##### A. Area Source Fugitive Emissions and Biomass Grinding Emissions

Two types of emissions controls are readily available and used for dust suppression of fugitive emissions at the site, fugitive emissions for the surrounding area of operations, and for equipment emissions from the portable wood/biomass grinding facility operation.

These two control methods are water and chemical dust suppressant. Chemical dust suppressant could be used for dust suppression on the area surrounding the portable wood/biomass grinding operation and for emissions from the portable wood/biomass grinding operation. However, because water is more readily available, more cost effective, equally effective as chemical dust suppressant, and more environmentally friendly, water has been identified as the most appropriate method of pollution control of particulate emissions for the general plant area. In addition, water suppression has been required of recently permitted similar sources. Johnson may, however, use chemical dust suppressant to assist in controlling particulate emissions from the surrounding plant area.

Johnson shall not cause or authorize to be discharged into the atmosphere from the Vermeer wood/biomass tub grinder and any other associated equipment any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes. Johnson must also take reasonable precautions to limit the fugitive emissions of airborne particulate matter from haul roads, access roads, parking areas, and the general area of operation. Johnson is required to water available on site (at all times) and to apply the water, as necessary, to maintain compliance with the opacity and reasonable precaution limitations. Johnson may also use chemical dust suppression, in order to maintain compliance with emission limitations in Section I.A of Permit #3375-00. The Department determined that using water and/or chemical dust suppressant to maintain compliance with the opacity requirements and reasonable precaution limitations constitutes BACT for the wood/biomass tub grinder operation.

##### B. Diesel Generator

Because of the limited amount of emissions produced by the diesel generator/engine and the lack of readily available/cost-effective add-on controls, the Department determined that there currently are no add-on controls available that would constitute BACT. Therefore, the Department determined that BACT for the diesel generator/engine is proper operation and maintenance with no additional controls.

The control options required for the proposed wood/biomass tub grinder facility and for the diesel generator/engine that would be used to power the facility are similar to other recently permitted similar sources.

V. Existing Air Quality

Permit #3375-00 is issued for the operation of a portable wood/biomass tub grinding facility to operate at various locations throughout the state of Montana. This facility would be allowed to operate at any area designated as attainment or unclassified for all National Ambient Air Quality Standards (NAAQS); excluding those counties that have a Department-approved permitting program, those areas considered Tribal Lands, or those areas in or within 10 km of certain PM<sub>10</sub> nonattainment areas. *A Missoula County air quality permit would be required for locations within Missoula County, Montana.* Johnson will be required to obtain an addendum to this air quality permit to operate at locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas.

VI. Air Quality Impacts

This permit is for a portable wood/biomass tub grinding facility to be located at various locations around Montana. This permit contains operational conditions and limitations that will protect air quality for this site and the surrounding area. Also, this facility is a portable source that will operate on an intermittent and temporary basis, so, any effects to air quality will be minor and short-lived. Further, the amount of controlled particulate emissions generated by this project should not cause concentrations of PM<sub>10</sub> in the ambient air that exceed the set standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 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  
1520 East Sixth Avenue  
P.O. Box 200901  
Helena, Montana 59620-0901  
(406) 444-3490

**FINAL ENVIRONMENTAL ASSESSMENT (EA)**

*Issued For:* Johnson Brothers Contracting, Inc.  
3757 North Reserve Street  
Missoula, MT 59808

*Permit Number:* 3375-00

*Preliminary Determination Issued:* February 17, 2005

*Department Decision Issued:* March 7, 2005

*Permit Final:* March 23, 2005

1. *Legal Description of Site:* Johnson submitted an application to operate a portable wood/biomass tub grinder plant at various locations throughout Montana, including the initial site location (the NE¼ of Section 2, Township 20 North, and Range 4 East, in Cascade County, Montana). Permit #3375-00 would apply while operating at any location in Montana, except within those areas having a Department approved permitting program, those areas considered to be tribal lands, or those areas in or within 10 km of certain PM<sub>10</sub> nonattainment areas. An addendum to this air quality permit would be required if Johnson intended to locate in or within 10 km of certain PM<sub>10</sub> nonattainment areas. *A Missoula County air quality permit would be required for locations within Missoula County, Montana.*
2. *Description of Project:* The permit applicant proposes the construction and operation of a portable wood/biomass tub grinder plant that would consist of a portable Vermeer wood/biomass tub grinder (up to 20 tons/hour), a diesel generator (up to 525 horsepower (hp)), and associated equipment.
3. *Objectives of Project:* The objective of the project would be to produce business and revenue for the company through the removal of wood/biomass accumulation and the production and sale of wood/biomass products. The issuance of Permit #3375-00 would allow Johnson to operate the permitted equipment at various locations throughout Montana.
4. *Alternatives Considered:* In addition to the proposed action, the Department 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 Johnson 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 listing of the enforceable permit conditions and a Permit Analysis, including a BACT analysis, would be contained in Permit #3375-00.

6. *Regulatory Effects on Private Property Rights:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and to demonstrate compliance with those requirements and would 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 Resource |       |          | 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 on terrestrial and aquatic life and habitats would be expected from the proposed project because the facility would be a source of air pollutants and small amounts of land disturbance would be required to construct the facility. The facility would be locating within the confines of an existing permitted industrial area, would be used for the process and disposal of wood wastes, and would have intermittent and seasonal operations. Therefore, impacts upon terrestrial and aquatic life would be minimal. Further, the Missouri River is approximately 1 mile away from the proposed operational site. Therefore, at such distances, impacts upon aquatic life would be minimal because facility emissions would be minor and would be well dispersed in the area of operations before reaching the water body.

B. Water Quality, Quantity, and Distribution

Water would be required for dust suppression on the surrounding roadways and areas of operation and for pollution control for equipment operations. However, pollutant deposition and water use would cause only minor, if any, impacts to water resources in these areas because the facility is relatively small and only a small amount of water would be required. Further, the equipment would be operated into an existing wood/biomass disposal area and would be used to convert the debris in a useful product and remove the existing debris piles from the current site. Water runoff would also be minimal because only small amounts of water would be used and, therefore, any impacts upon surface and groundwater quality impacts would be minor and short-lived.

C. Geology and Soil Quality, Stability, and Moisture

The wood/biomass tub grinder operations would have only minor impacts on geology and soil quality, stability, and moisture of soils because the emissions from the facility would be minor and short-lived (as further described in Section 7.F of this EA). Because only minor amounts of water would be used for pollution control, only minimal water runoff would occur (as described in Section 7.B of this EA). Since only minor amounts of pollution would be generated and corresponding emissions would be widely dispersed before settling upon vegetation and surrounding soils (as described in Section 7.D of this EA), impacts would be minor. Therefore, any effects upon geology and soil quality, stability, and moisture would be minor.

D. Vegetation Cover, Quantity, and Quality

Minor impacts would occur on vegetative cover, quantity, and quality because the facility would operate in an area where vegetation has been disturbed/removed and the facility would be a small industrial operation. The facility would be a relatively minor source of emissions and the pollutants would be greatly dispersed (as described in Section 7.F); therefore, deposition on vegetation from the proposed project would be minor. Also, because the water usage would be minimal (as described in Section 7.B) and the associated soil disturbance from the process and application of water and water runoff would be minimal (as described in Section 7.C), corresponding vegetative impacts would be minor.

E. Aesthetics

The wood/biomass tub grinder operation would be visible and would create additional noise while operating at this proposed site. The proposed operational site would be within the confines of Malmstrom Air Force Base. However, Permit #3375-00 would include conditions to control emissions, including visible emissions, from the plant. Further, the wood/biomass tub grinder operation would be portable, would operate on an intermittent and seasonal basis, and would be a small industrial source. Therefore, any visual aesthetic impacts would be minor and short-lived.

F. Air Quality

Air quality impacts from the proposed project would be minor because the facility would be a minor source of emissions, would operate on an intermittent and temporary basis, and would be located at a previously disturbed site on federally owned land (an existing air force base). Permit #3375-00 would include conditions limiting the facility's opacity and wood/biomass production. In addition, water would be available on site and used as necessary, to ensure compliance with opacity standards. Permit #3375-00 would also limit total emissions from the wood/biomass facility and any additional equipment owned and operated by Johnson at any given site, to 250 tons/year or less, excluding fugitive emissions.

Further, the Department determined that the wood/biomass facility would be a minor source of emissions as defined under the Title V Operating Permit Program because the source's permitted PTE would be well below the major source threshold level of 100 tons per year for any regulated pollutant. Pollutant deposition from the facility would be minimal because the pollutants emitted would be widely dispersed (from factors such as wind speed and wind direction) and would have minimal deposition (due to typical site topography and minimal vegetative cover in the general area of operations) on the surrounding area. Therefore, air quality impacts from operating the wood/biomass equipment in this area would be minor.

#### G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department, in an effort to assess any potential impacts to unique endangered, fragile, or limited environmental resources in the proposed area of operations, contacted the Montana Natural Heritage Program (MNHP) to identify any species of concern associated with the initial proposed site location (Section 2, Township 20 North, and Range 4 East, in Cascade County, Montana). Search results concluded there are 7 environmental resources of special concern within the defined area. The defined area, in this case, is defined by the township and range of the proposed site, with an additional one-mile buffer.

Aquatic species of special concern inhabiting the area surrounding the proposed project site include the Guadalupe water-nymph, Dwarf Woolly-heads, Entosthodon Rubiginosus.

Plant species of special concern inhabiting the area surrounding the proposed project site include the Funaria Americana, Chaffweed, California Waterwort, Many-Headed Sedge, and Roundleaf Water-hyssop.

The Funaria Americana and Entosthodon Rubiginosus are two species of special concern that have been identified as being within the defined area, but have been generalized from many miles of potential habitat. Also, the last documented observation of the Funaria Americana was in the year 1902. Because the facility would be a small and temporary operation that would be used specifically for the grinding of wood/biomass materials and operate in an area used to store such materials, it is not anticipated that the operation would have an effect on any of the species of concern. However, any effects would be minor and short-lived.

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

Due to the relatively small size of the facility, the wood/biomass tub grinder operation would only require small quantities of water, air, and energy for proper operation. Only small quantities of water would be required for dust suppression of emissions being generated at the site. In addition, impacts to air resources would be minor because the source would be a small industrial source of emissions, with intermittent and seasonal operations, and because air pollutants generated by the facility would be widely dispersed, as described in Section 7.F of this EA. Energy requirements would also be small, because the facility would be powered by an industrial diesel engine/generator that would use minor amounts of fuel. Overall, any impacts to water, air, and energy resources would be minor.

#### I. Historical and Archaeological Sites

The Department previously contacted the Montana Historical Society - State Historical Preservation Office (SHPO) in an effort to identify any historical and/or archaeological sites that may be present in the proposed area of construction/operation. Through those efforts, the Department concluded that there are no previously recorded historical or archaeological resources of concern within the proposed area of operations. According to past correspondence from SHPO, given the previous disturbance in the area, there would be a low likelihood of adverse disturbance to any archaeological or historic site. Therefore, no impacts upon historical or archaeological sites would be expected as a result of operating the proposed wood/biomass tub grinder plant.



J. Cumulative and Secondary Impacts

The wood/biomass tub grinder operation would cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment because the facility would generate minor amounts of PM, PM<sub>10</sub>, NO<sub>x</sub>, volatile organic compounds (VOC), CO, and oxides of sulfur (SO<sub>x</sub>). Emissions and noise generated from the equipment would cause minor impacts to the area of operations because the wood/biomass tub grinder operation would be relatively small, seasonal, and temporary. The site is removed from any home or structure (identified as more than 500 feet away from the proposed operational site). Further, no other sources are expected to operate as a result of permitting this equipment. Additionally, this facility, in combination with other emissions from Johnson’s equipment operations would not be permitted to exceed 250 tons per year of non-fugitive emissions. Overall, cumulative and secondary impacts to the physical and biological aspects of the human environment would be minor.

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 wood/biomass tub grinder operation would cause no disruption to the social structures and mores in the area because the source would be a minor industrial source of emissions, would be operated in an area already used to store wood/biomass materials, would be separated from the general population, and would only have temporary and intermittent operations. Further, the facility would be required to operate according to the conditions that would be placed in Permit #3375-00, which would limit the effects to social structures and mores because air emissions would be limited from compliance with the established permit conditions.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of this area would not be impacted by the proposed wood/biomass tub grinder operation because the equipment would be operating in an area separated from the general population, would be used to manage wood/biomass accumulation, and the facility would be a portable source with seasonal and intermittent operations. The predominant use of the surrounding area is as an air force base. The majority of current land use and impacts to corresponding cultural uniqueness and cultural diversity in the area would not change as a result of this wood/biomass tub grinder operation. Therefore, the cultural uniqueness and diversity of the area would not be affected.

C. Local and State Tax Base and Tax Revenue

The wood/biomass tub grinder operations would have little, if any, impact on the local and state tax base and tax revenue because the facility would be a relatively small industrial source and would have seasonal and intermittent operations. The facility would require the use of only a few employees (estimated at 2 employees). Thus, only minor impacts to the local and state tax base and revenue could be expected from the employees. Furthermore, the impacts to local tax base and revenue would be minor because the source would be portable and the money generated for taxes would be widespread.

D. Agricultural or Industrial Production

Only minimal impacts to local industrial production would occur from operating the wood/biomass tub grinder facility because the facility would be a minor source of wood/biomass production (typically wood chips) and air emissions. Additionally, only minimal impacts upon agricultural production would occur from operating the wood/biomass tub grinder facility because the operations would create minimal deposition of air pollutants on the surrounding land and the deposition would primarily be collected within the existing air force base. Further, facility operations would be small and temporary in nature and would be permitted with operational conditions and limitations that would minimize impacts upon surrounding vegetation, as described in Section 7.D of this EA. Therefore, these operations would have little effect upon adjacent lands that could be utilized for farmland and animal grazing and any such effects would be minor and temporary.

E. Human Health

Permit #3375-00 would incorporate conditions to ensure that the wood/biomass tub grinder facility would be operated in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As described in Section 7.F. of this EA, the air emissions from this facility would be minimized by the use of water for pollution control and other process limits that would be required by Permit #3375-00. Also, the facility would be operating on a temporary basis. Therefore, only minor impacts would be expected on human health from the proposed wood/biomass tub grinder facility.

F. Access to and Quality of Recreational and Wilderness Activities

The facility would initially locate within the boundaries of Malmstrom Air Force Base, where opportunities for recreational and wilderness activities for the general population would not exist. Noise from the facility would be minor because the facility would be a wood/biomass tub grinder operation that would be small and would operate in an area removed from the general population. As a result, the amount of noise generated from the wood/biomass tub grinder operation would be

minimal. Also, the facility would operate on a seasonal and intermittent basis and would be a relatively minor industrial source of emissions. Therefore, any changes in the quality of recreational and wilderness activities created by operating the equipment at this site would not be expected to exist.

G. Quantity and Distribution of Employment

The portable wood/biomass tub grinder operation would be relatively small, would have seasonal and intermittent operations, and would only require two employees to operate. No individuals would be expected to permanently relocate to this area of operation as a result of operating the wood/biomass tub grinder facility. Therefore, no effects upon the quantity and distribution of employment in this area would be expected.

H. Distribution of Population

The portable wood/biomass tub grinder operation would be small and would only require a two existing employees to operate. No individuals would be expected to permanently relocate to this area of operation as a result of operating the wood/biomass tub grinder facility. Therefore, the wood/biomass tub grinder facility would not disrupt the normal population distribution.

I. Demands of Government Services

Minor increases would be seen in traffic on existing roadways in the area while the wood/biomass tub grinder operation is in progress. In addition, government services would be required for acquiring the appropriate permits for the proposed project and to verify compliance with the permits that would be issued. However, demands for government services would be minor, because the source is a minor industrial source and is seasonal in nature.

J. Industrial and Commercial Activity

The wood/biomass tub grinder operation would represent only a minor increase in the industrial activity in the proposed area of operation because the source would be a relatively small industrial source that would be portable and temporary in nature. No additional industrial or commercial activity would be expected as a result of the proposed wood/biomass tub grinder operation.

K. Locally Adopted Environmental Plans and Goals

Johnson would be allowed, by Permit #3375-00, to operate in areas designated by the Environmental Protection Agency (EPA) as attainment or unclassified for ambient air quality. An addendum would be required to operate in or within 10 km of certain PM<sub>10</sub> nonattainment areas. Permit #3375-00 would contain limits for protecting air quality and to keep facility emissions in compliance with any applicable ambient air quality standards. Because the facility would be a small and portable source and would have intermittent and seasonal operations, any impacts from the facility would be minor and short-lived. The Department is unaware of any local environmental plans or goals. Permit #3375-00 would be protective of the local areas.

L. Cumulative and Secondary Impacts

The wood/biomass tub grinder operations would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area of operation because the source would be a portable and temporary source. Further, no other industrial operations are expected to result from the permitting of this facility. Minor increases in traffic

would have minor effects on local traffic in the immediate area. Because the source is relatively small and temporary, only minor economic impacts to the local economy would be expected from operating the facility. Further, this facility may be operated in conjunction with other equipment owned and operated by Johnson, but any cumulative impacts upon the social and economic aspects of the human environment would be minor and short-lived. Thus, only minor and temporary cumulative effects would result to the local economy.

*Recommendation:* An EIS is not required.

*If an EIS is not required, explain why the EA is an appropriate level of analysis:* All potential effects resulting from construction and operation of the proposed facility are minor; therefore, an EIS is not required.

*Other groups or agencies contacted or which may have overlapping jurisdiction:* Department of Environmental Quality - Permitting and Compliance Division (Industrial and Energy Minerals Bureau); Montana Natural Heritage Program; and the State Historic Preservation Office (Montana Historical Society).

*Individuals or groups contributing to this EA:* Department of Environmental Quality (Air Resources Management Bureau and Industrial and Energy Minerals Bureau), Montana State Historic Preservation Office (Montana Historical Society).

*EA prepared by:* Ron Lowney

*Date:* February 15, 2004