AIR QUALITY PERMIT

Issued To: T.B. Gray Inc.
P.O. Box 4561
Whitefish, MT 59937

Permit: #3360-00
Application Complete: 11/05/04
Preliminary Determination Issued: 11/18/04
Department's Decision Issued: 12/06/04
Permit Final: 12/22/04
AFS: #777-3360

An air quality permit, with conditions, is hereby granted to T.B. Gray Inc. (T.B. Gray) pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.701, *et seq.*, as amended, for the following:

SECTION I: Permitted Facilities

A. Permitted Equipment

T.B. Gray operates a portable wood grinding operation including a Peterson Pacific horizontal wood grinder powered by a 460-horsepower (hp) Caterpillar diesel engine and associated equipment.

B. Plant Location

T.B. Gray operates a portable wood grinding operation that will originally locate in the NE¼ of Section 8, Township 27 North, Range 21 West, in Flathead County. However, Permit #3360-00 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_{10}) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* Addendum 1 applies to the T.B. Gray facility while operating at any location in or within 10 km of certain PM_{10} nonattainment areas, including the proposed site location.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. T.B. Gray shall not cause or authorize to be discharged into the atmosphere from the Peterson Pacific horizontal wood 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. T.B. Gray shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

3. T.B. Gray 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. Total grinding production from the facility shall be limited to 2,190,000 cubic yards during any rolling 12-month time period (ARM 17.8.749).

5. T.B. Gray shall not operate more than one diesel engine/generator at any given time and the maximum rated design capacity shall not exceed 460 hp (ARM 17.8.749).

6. If the permitted equipment is used in conjunction with any other equipment owned or operated by T.B. Gray, 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).

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 this 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 17.8.765).

2. T.B. Gray 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, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

3. T.B. Gray 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 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. T.B. Gray 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 T.B. Gray 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. T.B. Gray shall document, by month, the total grinding production for the facility. By the 25th day of each month, T.B. Gray shall total the grinding production during the previous 12 months to verify compliance with the 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).

D. Notification

T.B. Gray shall submit written notification of the original location of operation at least 15 days prior to operational set-up (ARM 17.8.749).

SECTION III: Addendum

T.B. Gray shall comply with all conditions in Addendum 1 to Permit #3360-00 when operating in or within 10 km of certain PM_{10} nonattainment areas as described in Addendum 1 (ARM 17.8.749).

SECTION IV: General Conditions

A. Inspection – T.B. Gray 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 T.B. Gray fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving T.B. Gray 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. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by T.B. Gray 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 be 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. T.B. Gray 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.

PERMIT ANALYSIS
T.B. Gray Inc.
Permit #3360-00

I. Introduction/Process Description

T.B. Gray Inc. (T.B. Gray) owns and operates a portable horizontal wood grinder. The facility is initially located in the NE¼ of Section 8, Township 27 North, Range 21 West, in Flathead County.

A. Permitted Equipment

T.B. Gray operates a portable wood grinding operation including a Peterson Pacific HC2410 wood grinder powered by a 460-horsepower (hp) Caterpillar diesel engine and associated equipment.

B. Source Description

T.B. Gray proposes to use this portable wood grinding plant to dispose of piles resulting from forest thinning, commercial arborists, etc.

For a typical operational set-up, piles containing wood waste material are loaded via an excavator into the wood grinder on the wood grinder's in-feed belt deck. From the wood grinder, material is sent via conveyor to a chip truck for hauling.

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 Montana Department of Environmental Quality (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, 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).

T.B. Gray 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 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
2. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
3. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
4. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

T.B. Gray 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. (2) Under this rule, T.B. Gray 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 Standard 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 NSPS 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 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. T.B. Gray submitted the appropriate permit application fee for the current permit action.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department; the air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year. An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that 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 person to obtain an air quality permit or permit alteration to construct, alter or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. T.B. Gray has a PTE greater than 25 tons per year of nitrogen oxides (NO_X); therefore, an air quality permit is required.

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

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

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration or use of a source. T.B. Gray 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. T.B. Gray submitted an affidavit of publication of public

notice for the October 14, 2004, issue of the *Daily Inter Lake*, a newspaper of general circulation in the Town of Kalispell 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 Best Available Control Technology (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 T.B. Gray of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

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

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

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

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

14. ARM 17.8.765 Transfer of Permit. (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 potential to emit 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 PM_{10} in a serious PM_{10} 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 #3360-00 for T.B. Gray, the following conclusions were made:

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

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

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

   d. This facility is not subject to any current NSPS.

e. This facility is not subject to any current NESHAP standards.

f. This source is not a Title IV affected source nor a solid waste combustion unit.

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

Based on these facts, the Department determined that T.B. Gray will be a minor source of emissions as defined under the Title V operating permit program.

III. BACT Determination

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

The Department conducted a BACT analysis for PM/PM_{10}, NO_X, and carbon monoxide (CO) emissions resulting from the proposed project.

PM/PM_{10} BACT

All visible emissions from the Peterson Pacific wood grinder and any other associated equipment are limited to 20% opacity. Also, T.B. Gray must take reasonable precautions to limit the fugitive emissions of airborne particulate matter on haul roads, access roads, parking areas, and general plant property. T.B. Gray shall use water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation. The Department determined that the 20% opacity limit and using water and/or chemical dust suppressant to maintain compliance with the reasonable precautions limitation constitutes BACT for all sources of PM/PM_{10} emissions associated with this project.

NO_X BACT

For NO_X emissions resulting from operation of the 460-hp diesel engine, the Department conducted a BACT evaluation including the following technologies: Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), Electronic Engine Control (EEC)/Intake Air-Cooling (IAC), and no additional control/proper design and combustion. Based on similar source BACT review the Department determined the two most effective controls for sources of this type are SCR and no additional control/proper design and combustion.

SCR Control

SCR is a post-combustion gas treatment technique for reduction of nitric oxide (NO) and nitrogen dioxide (NO_2) in the engine exhaust stream to molecular nitrogen, water, and oxygen. In the SCR process, aqueous or anhydrous ammonia (NH_3) or urea is used as a reducing agent, and is injected into the flue gas upstream of the catalyst bed. NO_X and NH_3 combine at the catalyst surface, forming an ammonium salt intermediate, which subsequently decomposes to produce elemental nitrogen and water. Similar source BACT review has demonstrated that SCR can achieve NO_X reduction as high as 85%. However, the use of SCR has the potential for toxic and additional environmental and energy impacts.

Proper Design and Combustion

Proper design and combustion reduces NO_X formation through optimum combustion practices, proper design, and maintenance. The control efficiency for proper design and combustion was determined by comparing emission factors from AP-42, Table 3.3-1, October 1996, from uncontrolled sources and the emissions data from the manufacturer of the engine. Proper design and combustion will achieve approximately 50% reduction in NO_X emissions.

In summary, because proper design and combustion will achieve significant NO_X reduction, SCR was determined to be economically infeasible with potential for toxic and additional environmental and energy impacts. Proper design and combustion is determined to be economically feasible with little potential for toxic and additional environmental and energy impacts. Therefore, for the proposed generator, the Department determined that proper design and combustion without any add-on control is BACT.

CO BACT

For CO emissions resulting from operation of the 460 hp diesel engine, the Department considered oxidation of post combustion gases and no additional control (proper design and operation) for the BACT analysis. In an ideal combustion process, all of the carbon and hydrogen contained within the fuel are oxidized to form carbon dioxide (CO_2) and water (H_2O). Emission of CO in a combustion process is the result of incomplete organic fuel combustion. Poor fuel-air mixing, flame quenching and low residence time can cause CO emissions.

Oxidation of Post Combustion Gases

Although various specialized technologies exist, fundamentally, oxidizers or incinerators use heat to destroy CO in the gas stream. Oxidation controls, like combustion processes, ideally break down the molecular structure of an organic compound into CO_2 and H_2O. Temperature, residence time, and turbulence of the system affect CO control efficiency. Incinerators have the potential for very effective CO control; however, this efficiency comes at the expense of increasing NO_X production.

The Department's review of similar sources indicates that the cost per ton of reduction for CO using oxidation of post combustion gases would be approximately $64,000 per ton. The Department determined that, for the proposed engine, oxidation of post combustion gases does not constitute BACT. Oxidation of post combustion gases has not been required of other recently permitted similar sources.

No Additional Control – Proper Design and Operation

Reduction of CO can be accomplished by controlling the combustion temperature, residence time, and available oxygen. Based on the potential emissions from the generator and the incremental cost to control CO emissions, the Department determined that the use of "no additional controls" constitutes BACT for CO emissions resulting from the diesel engine.

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.

IV. Emission Inventory

	Ton/Year					
Source	**PM**	**PM_{10}**	**NO_X**	**CO**	**VOC**	**SO_X**
Peterson Pacific Wood Grinder	1.10	0.55	--	--	--	--
Material Transfer	3.29	1.64	--	--	--	--
Bulk Loading	2.20	1.10	--	--	--	--
CAT Diesel Engine (460 hp)	4.43	4.43	62.46	13.46	4.98	4.13
Haul Roads	2.74	1.23	--	--	--	--
Total	**13.76**	**8.95**	**62.46**	**13.46**	**4.98**	**4.13**

Peterson Pacific Wood Grinder

Process Rate: (250 yd^3/hr) (27 ft^3/yd^3) (7.41 lb/ft^3) (0.0005 ton/lb) = 25 ton/hr (Company Info.)
Control Efficiency: 50% (equipment design enclosure)
Hours of Operation: 8760 hr/yr

PM Emissions
Emission Factor: 0.02 lb/ton (Department Emission Factor – Similar Source)
Calculations: 0.02 lb/ton * 25 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 50% = 1.10 ton/yr

PM_{10} Emissions
Emission Factor: 0.01 lb/ton (Assume 50% of PM is PM_{10})
Calculations: 0.01 lb/ton * 25 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 50% = 0.55 ton/yr

Material Transfer

Process Rate: 25 ton/hr (Company Information)
Number of Transfers: 3 Transfers
Control Efficiency: 50% (equipment design enclosure)
Hours of Operation: 8760 hr/yr

PM Emissions
Emission Factor: 0.02 lb/ton (Department Emission Factor – Similar Source)
Calculations: 0.02 lb/ton * 25 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 50% * 3 = 3.29 ton/yr

PM_{10} Emissions
Emission Factor: 0.01 lb/ton (Assume 50% of PM is PM_{10})
Calculations: 0.01 lb/ton * 25 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 50% * 3 = 1.64 ton/yr

Bulk Loading

Process Rate: 25 ton/hr (Company Information)
Hours of Operation: 8760 hr/yr

PM Emissions
Emission Factor: 0.02 lb/ton (Department Emission Factor – Similar Source)
Calculations: 0.02 lb/ton * 25 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 2.20 ton/yr

PM_{10} Emissions
Emission Factor: 0.01 lb/ton (Assume 50% of PM is PM_{10})
Calculations: 0.01 lb/ton * 25 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 50% = 1.10 ton/yr

CAT Diesel Engine

Power Output Capacity: 460 hp
Hours of Operation: 8760 hr/yr

PM Emissions
Emission Factor: 2.2 X 10^{-3} lb/hp-hr (AP-42 Table 3.3-1 10/96)
Calculations: 460 hp * 2.2 X 10^{-3} lb/hp-hr * 8760 hr/yr * 0.0005 ton/lb = 4.43 ton/yr

PM_{10} Emissions
Emission Factor: 2.2×10^{-3} lb/hp-hr (AP-42 Table 3.3-1 10/96
Calculations: 460 hp * 2.2×10^{-3} lb/hp-hr * 8760 hr/yr * 0.0005 ton/lb = 4.43 ton/yr

NO_X Emissions
Emission Factor: 0.031 lb/hp-hr (AP-42 Table 3.3-1 10/96)
Calculations: 460 hp * 0.031 lb/hp-hr * 8760 hr/yr * 0.0005 ton/lb = 62.46 ton/yr

CO Emissions
Emission Factor: 6.68×10^{-3} lb/hp-hr (AP-42 Table 3.3-1 10/96)
Calculations: 460 hp * 6.68×10^{-3} lb/hp-hr * 8760 hr/yr * 0.0005 ton/lb = 13.46 ton/yr

VOC Emissions
Emission Factor: 2.47×10^{-3} lb/hp-hr (AP-42 Table 3.3-1 10/96)
Calculations: 460 hp * 2.47×10^{-3} lb/hp-hr * 8760 hr/yr * 0.0005 ton/lb = 4.98 ton/yr

SO_X Emissions
Emission Factor: 2.05×10^{-3} lb/hp-hr (AP-42 Table 3.3-1 10/96)
Calculations: 460 hp * 2.05×10^{-3} lb/hp-hr * 8760 hr/yr * 0.0005 ton/lb = 4.13 ton/yr

Haul Roads

Vehicle Miles Traveled (VMT): 5 VMT/day (Estimated)
Control Efficiency: 50% (Water Spray/Chemical Dust Suppressant)

PM Emissions
Emission Factor 6 lb/VMT (Department Emission Factor)
Calculations: 6 lb/VMT * 5 VMT/day * 50% * 365 day/yr * 0.0005 ton/lb = 2.74 ton/yr

PM_{10} Emissions
Emission Factor 2.70 lb/VMT (Department Emission Factor)
Calculations: 2.70 lb/VMT * 5 VMT/day * 50% * 365 day/yr * 0.0005 ton/lb = 1.23 ton/yr

V. Air Quality Impacts

Permit #3360-00 will cover 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_{10} non-attainment area, T.B. Gray will be required to operate in compliance with Addendum 1 to Permit #3360-00. The addendum includes more stringent limitations for operations in the nonattainment area. Addendum 1 to this permit covers summertime operation in any PM_{10} nonattainment area in Montana and winter operations at the existing permitted T.B. Gray Kalispell site within the Kalispell PM_{10} nonattainment area. Screen View air dispersion modeling was conducted for winter operations at the T.B. Gray Kalispell site and demonstrated compliance with the National and Montana Ambient Air Quality Standards (NAAQS/MAAQS); therefore, the Department determined that winter operations at the proposed site would maintain compliance with applicable standards. Further, the production limit established for winter operations at the Kalispell site will ensure compliance with the NAAQS/MAAQS for summer operations at any location in or within 10 km of the following PM_{10} nonattainment areas: Libby, Kalispell, Columbia Falls, Whitefish, Thompson Falls, and Butte.

VI. Ambient Air Impact Analysis

Because the proposed wood grinding plant is small by industrial standards and is portable, the Department believes it will not cause or contribute to a violation of any ambient air quality standard. In addition, the Department conducted Screen View air dispersion modeling to

demonstrate that winter operations within the Columbia Falls PM_{10} nonattainment area would maintain compliance with applicable standards. The Screen View model demonstrated compliance with the NAAQS/MAAQS.

ADDENDUM 1
T.B. Gray Inc.
Permit #3360-00

An addendum to air quality Permit #3360-00 is issued to T.B. Gray Inc. (T.B. Gray) pursuant to Section 75-2-204 and 75-2-211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.734, as amended, for the following:

I. Permitted Equipment

On November 5, 2004, T.B. Gray applied for Addendum 1 to Permit #3360-00 for the operation of a portable wood grinding plant to be located at any location in or within 10 kilometers (km) of the following particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas: Libby, Kalispell, Columbia Falls, Whitefish, Thompson Falls, and Butte, as described below.

II. Seasonal and Site Restrictions

Addendum 1 applies to T.B. Gray while operating at any location in or within 10 km of certain PM_{10} nonattainment areas. Additionally, seasonal and site restrictions apply to the facility as follows:

A. During the winter season (October 1 through March 31) – The only location in or within 10 km of a PM_{10} nonattainment area where T.B. Gray may operate is the existing T.B. Gray Kalispell site: NE¼ of Section 8, Township 27 North, Range 21 West, in Flathead County, Montana.

B. During the summer season (April 1 through September 30) – T.B. Gray may operate at any location in or within 10 km of the Libby, Thompson Falls, Kalispell, Whitefish, Columbia Falls, and Butte PM_{10} nonattainment areas.

C. T.B. Gray shall comply with the limitations and conditions contained in Addendum 1 to Permit #3360-00 while operating in or within 10 km of any of the previously listed PM_{10} nonattainment areas during the applicable winter or summer season. Addendum 1 shall be valid until revoked or modified. The Department of Environmental Quality (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

The Department conducted Screen View air dispersion modeling, an Environmental Protection Agency (EPA) approved modeling program, to determine the maximum allowable plant production rate that would maintain compliance with the National Ambient Air Quality Standards (NAAQS) and the Montana Ambient Air Quality Standards (MAAQS) for PM_{10}. The NAAQS and MAAQS are designed to be protective of human health and public welfare. The Department established production limits in the addendum based on the modeling analysis.

A. Operational

1. T.B. Gray shall not cause or authorize to be discharged into the atmosphere from the facility any visible emissions which exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

2. T.B. Gray shall not cause or authorize to be discharged into the atmosphere from the facility any fugitive emissions, including, but not limited to, truck loading or unloading and material transfer operations, which exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

3. All visible emissions from the wood grinding plant and associated equipment shall be limited to 10% opacity (ARM 17.8.749).

4. Total grinding production from the facility shall be limited to 6,000 cubic yards during any rolling 24-hour time period (ARM 17.8.749).

5. T.B. Gray shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

6. T.B. Gray 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).

7. T.B. Gray 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 reasonable precautions and visible fugitive emission limitations (ARM 17.8.749).

B. Operational Reporting Requirements

1. T.B. Gray shall provide the Department with written notification of job completion within 10 working days of job completion (ARM 17.8.749).

2. T.B. Gray shall provide written notice of relocation of the permitted equipment at least 15 days prior to the physical transfer of equipment (ARM 17.8.734).

3. T.B. Gray shall document, by day, the total plant material throughput. T.B. Gray shall sum the total material through-put during the previous 24 hours to verify compliance with the limitation in Section III.A.4. A written report of compliance verification and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted no later than March 15 and may be submitted along with the annual emission inventory (ARM 17.8.749).

4. Production information for the site(s) covered by this addendum shall be submitted to the Department within 30 days of completion of the project. The information shall include (ARM 17.8.749):

   a. Material throughput

b. Hours of operation

c. Fugitive dust information consisting of a listing of all plant vehicles, including the following for each vehicle type:

i. Number of vehicles
ii. Vehicle type
iii. Vehicle weight, loaded
iv. Vehicle weight, unloaded
v. Number of tires on vehicle
vi. Average trip length
vii. Number of trips per day per vehicle
viii. Average vehicle speed
ix. Area of activity
x. Vehicle fuel usage (gasoline or diesel) annual total

d. Fugitive dust control for haul roads and general plant area:

i. Hours of operation of water trucks
ii. Application schedule for chemical dust suppressant, if applicable

ADDENDUM 1 ANALYSIS
T.B. Gray Inc.
Permit #3360-00

I. Permitted Equipment

T.B. Gray Inc. (T.B. Gray) operates a portable wood grinding operation including a Peterson Pacific wood grinder, a 460-horsepower (hp) Caterpillar diesel engine, and associated equipment.

II. Source Description

For a typical operational set-up, piles containing wood waste are loaded via an excavator into the wood grinder on the wood grinder's in-feed belt deck. From the wood grinder material is sent via conveyor to a chip truck for 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 Montana 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 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.

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. 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.

C. 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.

T.B. Gray must submit proof of compliance with the transfer and public notice requirements when they transfer to the location covered by this addendum and will only be allowed to stay in the new location for a period of less than 1 year. Also, the conditions and controls of this addendum will keep T.B. Gray from having a significant impact on the PM_{10} nonattainment areas covered by this permit.

IV. Emission Inventory

	Lb/Day					
Source	**PM**	**PM_{10}**	**NO_X**	**CO**	**VOC**	**SO_X**
Peterson Pacific Wood Grinder	6.00	3.00	--	--	--	--
Material Transfer	18.00	9.00	--	--	--	--
Bulk Loading	12.00	6.00	--	--	--	--
CAT Diesel Engine (460 hp)	24.29	24.29	342.24	73.75	27.27	22.63
Haul Roads	15.00	6.75	--	--	--	--
Total	**75.29**	**49.04**	**342.24**	**73.75**	**27.27**	**22.63**

Peterson Pacific Wood Grinder

Process Rate: 600 tons/day (Permit Addendum Limit)
Control Efficiency: 50% (equipment design enclosure)

PM Emissions
Emission Factor: 0.02 lb/ton (Department Emission Factor – Similar Source)
Calculations: 0.02 lb/ton * 600 ton/day * 50% = 6.0 lb/day

PM_{10} Emissions
Emission Factor: 0.01 lb/ton (Assume 50% of PM is PM_{10})
Calculations: 0.01 lb/ton * 600 ton/day * 50% = 3.0 lb/day

Material Handling

Process Rate: 600 ton/day (Permit Addendum Limit)
Number of Transfers: 3 Transfers
Control Efficiency: 50% (equipment design enclosure)

PM Emissions
Emission Factor: 0.02 lb/ton (Department Emission Factor – Similar Source)
Calculations: 0.02 lb/ton * 600 ton/day * 3 transfers * 50% = 18.0 lb/day

PM_{10} Emissions
Emission Factor: 0.01 lb/ton (Assume 50% of PM is PM_{10})
Calculations: 0.01 lb/ton * 600 ton/day * 3 transfers * 50% = 9.0 lb/day

Bulk Loading

Process Rate: 600 ton/day (Permit Addendum Limit)

PM Emissions
Emission Factor: 0.02 lb/ton (Department Emission Factor – Similar Source)
Calculations: 0.02 lb/ton * 600 ton/day = 12.0 lb/day

PM_{10} Emissions
Emission Factor: 0.01 lb/ton (Assume 50% of PM is PM_{10})
Calculations: 0.01 lb/ton * 600 ton/day = 6.0 lb/day

CAT Diesel Engine

Power Output Capacity: 460 hp
Hours of Operation: 24 hr/day

PM Emissions
Emission Factor: 2.2×10^{-3} lb/hp-hr (AP-42 Table 3.3-1 10/96)
Calculations: 460 hp * 2.2×10^{-3} lb/hp-hr * 24 hr/day = 24.29 lb/day

PM_{10} Emissions
Emission Factor: 2.2×10^{-3} lb/hp-hr (AP-42 Table 3.3-1 10/96)
Calculations: 460 hp * 2.2×10^{-3} lb/hp-hr * 24 hr/day = 24.29 lb/day

NO_X Emissions
Emission Factor: 0.31 lb/hp-hr (AP-42 Table 3.3-1 10/96)
Calculations: 460 hp * 0.31 lb/hp-hr * 24 hr/day = 342.24 lb/day

CO Emissions
Emission Factor: 6.68×10^{-3} lb/hp-hr (AP-42 Table 3.3-1 10/96)
Calculations: 460 hp * 6.68×10^{-3} lb/hp-hr * 24 hr/day = 73.75 lb/day

VOC Emissions
Emission Factor: 2.47×10^{-3} lb/hp-hr (AP-42 Table 3.3-1 10/96)
Calculations: 460 hp * 2.47×10^{-3} lb/hp-hr * 24 hr/day = 27.27 lb/day

SO_X Emissions
Emission Factor: 2.05×10^{-3} lb/hp-hr (AP-42 Table 3.3-1 10/96)
Calculations: 460 hp * 2.05×10^{-3} lb/hp-hr * 24 hr/day = 22.63 lb/day

Haul Roads

Vehicle Miles Traveled (VMT): 5 VMT/day (Estimated)
Control Efficiency: 50% (Water Spray/Chemical Dust Suppressant)

PM Emissions
Emission Factor 6 lb/VMT (Department Emission Factor)
Calculations: 6 lb/VMT * 5 VMT/day * 50% = 15 lb/day

PM_{10} Emissions
Emission Factor 2.70 lb/VMT (Department Emission Factor)
Calculations: 2.70 lb/VMT * 5 VMT/day * 50% = 6.75 lb/day

V. Existing Air Quality

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new NAAQS for PM_{10}. Due to exceedances of the national standards for PM_{10}, the cities of Kalispell (and the nearby Evergreen area), Columbia Falls, Butte, Whitefish, Libby, Missoula, and Thompson Falls were designated by EPA as nonattainment for PM_{10}. As a result of this designation, the EPA required the Department and the City-County Health Departments to submit PM_{10} 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_{10} emissions.

Addendum 1 to Permit #3360-00 sets conditions and limitations that allow for this portable wood grinding plant to be located in or within 10 km of certain PM_{10} nonattainment areas during the summer months (April through September) and at the T.B. Gray Kalispell site during winter operations (October through September). Further, the Department conducted Screen View air dispersion modeling to demonstrate compliance with the NAAQS/MAAQS.

VI. Air Quality Impacts

This addendum is for a portable wood grinding plant to be located in certain PM_{10} nonattainment areas in Montana. In the view of the Department, the amount of controlled particulate emissions generated by this project will not cause concentrations of PM_{10} in the ambient air that exceed the set standard. The Department conducted Screen View modeling demonstrating compliance with the NAAQS/MAAQS, a description of the modeling analysis is contained in Section III of Addendum 1. In addition, this source is portable and any air quality impacts will be minimized by the short duration of operation at any given site. Impacts will be minimized by the limitations that are established in the addendum.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 2-10-105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

VIII. Environmental Assessment

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

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

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To*:* T.B. Gray Inc.
P.O. Box 4561
Whitefish, MT 59937

Air Quality Permit Number: 3360-00

Preliminary Determination Issued: November 18, 2004
Department Decision Issued: December 3, 2004
Permit Final: December 22, 2004

1. *Legal Description of Site:* Permit #3360-00 is issued for the operation of a portable wood grinding plant to be located in the NE¼ of Section 8, Township 27 North, Range 21 West, in Flathead County, Montana.

2. *Description of Project:* The plant is used to dispose of wood-waste piles. For a typical operational set-up, piles containing wood waste are loaded via an excavator into the wood grinder on the wood grinder's in-feed belt deck. From the wood grinder, material is sent via conveyor to a chip truck for hauling.

3. *Objectives of Project:* The current permit action would allow for winter operations within the Kalispell PM_{10} nonattainment area and summer operations in or within 10 km of certain PM_{10} nonattainment areas. In addition, operation of the proposed wood grinding plant would result in increased business and revenue for T.B. Gray.

4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the "no-action" alternative. The "no-action" alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because T.B. Gray demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.

5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in Permit #3360-00.

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 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 or aquatic life and habitats would be expected from the proposed project because the facility would be a source of air pollutants and minor amounts of land disturbance would be required to construct the facility. While the facility would emit air pollutants and corresponding deposition of pollutants would occur, the Department determined that any impacts from deposition would be minor due to the relatively small amount of pollutants emitted, dispersion characteristics of the pollutants and the atmosphere (see Section 7.F of this EA), and conditions that would be placed in Permit #3360-00. Any impacts from facility construction would be minor due to the relatively small size of the project. Overall, any impacts to terrestrial and aquatic life and habitats would be minor.

B. Water Quality, Quantity, and Distribution

Emissions from the proposed project could potentially affect existing resources of water in any proposed project area. However, the source would be required to apply BACT to emissions sources to minimize any potential emissions and thus minimize any potential impact to area water resources. Further, because the facility would be a temporary, seasonal, and a relatively small industrial source, any impacts to water resources in the proposed project area would be minor and short-lived.

In addition, water would be used for dust suppression, but would only cause a minor disturbance to any given area. No surface water or ground water quality problems would be expected as a result of using water for dust suppression. Any accidental spills or leaks from equipment would be required to be handled according to the appropriate environmental regulations.

C. Geology and Soil Quality, Stability, and Moisture

Minor impacts would occur on the geology and soil quality, stability, and moisture from the proposed project because minor construction would be required to complete the project. Any impacts to the geology and soil quality, stability, and moisture from facility construction would

be minor due to the relatively small size of the project. In addition, while deposition of pollutants would occur, the Department determined that the chance of deposition of pollutants impacting the geology and soil in the areas surrounding the site would be minor due to the relatively small amount of pollutants emitted and the dispersion characteristics of the pollutants and the atmosphere (see Section 7.F of this EA). The conditions that would be placed in Permit #3360-00 would also minimize impacts to geology and soil by limiting the amount of equipment that would be installed at the facility and limiting the emissions from the facility. Overall, any impacts to the geology and soil quality, stability, and moisture would be minor.

D. Vegetation Cover, Quantity, and Quality

Minor impacts would occur on vegetation cover, quantity, and quality because minor construction would be required to complete the project. Any impacts to the vegetation cover, quantity, and quality from facility construction would be minor due to the relatively small size of the project. In addition, while deposition of pollutants would occur, the Department determined that the chance of deposition of pollutants impacting the vegetation in the areas surrounding the site would be minor due to the relatively small amount of pollutants emitted and dispersion characteristics of the pollutants and the atmosphere (see Section 7.F of this EA). The conditions that would be placed in Permit #3360-00 would also minimize the impacts to vegetation by limiting the amount of equipment that would be installed at the facility and limiting the emissions from the facility. Overall, any impacts to vegetation cover, quantity, and quality would be minor.

E. Aesthetics

The operations would be visible and would create additional noise in any given area of operation. Permit #3360-00 would include conditions to control emissions (including visible emissions) from the plant. In addition, the operations would take place within a previously disturbed timber cut site. Because the site is typically used for industrial purposes such as that proposed for the current permit action, the proposed operations would be typical and would have only a minor effect on the proposed project area. Further, given that the proposed project would be a temporary, seasonal, and a relatively small industrial operation any impact would be minor and short-lived.

F. Air Quality

The air quality impacts from the operations would be minor. Permit #3360-00 would include conditions limiting the opacity from the plant as well as requiring water and/or chemical dust suppressant to control air pollution. The operations would be limited by Permit #3360-00 to total emissions of 250 tons/year or less from non-fugitive sources at the plant, in addition to any additional equipment used by T.B. Gray at any individual site.

The Clean Air Act, which was last amended in 1990, requires EPA to set NAAQS for pollutants considered harmful to public health and the environment (Criteria Pollutants: CO, NO_X, Ozone, Lead, PM_{10}, sulfur oxides (SO_X)). The Clean Air Act established two types of NAAQS, Primary and Secondary. Primary Standards set limits to protect public health, including, but not limited to, the health of “sensitive” populations such as asthmatics, children, and the elderly. Secondary Standards set limits to protect public welfare, including, but not limited to, protection against decreased visibility, damage to animals, crops, vegetation, and buildings. Primary and Secondary Standards are identical with the exception of sulfur dioxide which has a less stringent Secondary Standard. Permit #3360-00 would contain conditions and limitations, which would require compliance with all applicable air quality standards.

The Department conducted Screen View air dispersion modeling for operations in or within 10 km of certain PM_{10} nonatainment areas. The Screen View model demonstrates that permitted operations would maintain compliance with all applicable air quality standards.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department, in an effort to assess any potential impacts to any unique endangered, fragile, or limited environmental resources in the initial proposed area of operation (NE¼ of Section 8, Township 27 North, Range 21 West, in Flathead County, Montana), contacted the Montana Natural Heritage Program (MNHP). Search results concluded there is one known environmental resources of special concern within the area. The search area, in this case, is defined by the township and range of the proposed site, with an additional one-mile buffer. The resource of special concern is the Lynx.

The resource of concern identified is the Lynx. Although the Lynx is found within a 1-mile radius of the proposed project site, the majority of emissions from the proposed project would be expected to disperse before reaching the facility boundaries. Further, any impacts on this resource of concern would be minor because the facility's potential to emit would be relatively small by industrial standards.

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

The proposed project would have impacts on the demands on the environmental resources of air and water because the facility would be a source of air pollutants. However, any impacts on the environmental resources of air and water would be minor because the facility's potential to emit would be relatively small by industrial standards. While deposition of pollutants would occur, as explained in Sections 7.B and 7.F of this EA, the Department determined that the chance of the proposed project impacting demands on air and water resources would be minor due to dispersion characteristics of pollutants and the atmosphere and conditions that would be placed in Permit #3360-00.

The proposed project would have minor impacts on the demand on the environmental resource of energy because only small energy consuming equipment is proposed for use as part of the project. The non-renewable resource of crude oil and natural gas would have minor impacts because the generator would burn diesel fuel. Overall, any impacts on the demands on the environmental resources of air, water, and energy would be minor.

I. Historical and Archaeological Sites

In an effort to identify any historical and archaeological sites near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there have not been any previously recorded historic or archaeological sites within the proposed area. In addition, SHPO records indicated that no previous cultural resource inventories have been conducted in the area. SHPO determined that a cultural resource inventory is unwarranted at this time. The Department determined that due to the previous disturbance in the area and the small amount of land disturbance that would be required to construct the facility, the chance of the project impacting any cultural or historic sites would be minor.

J. Cumulative and Secondary Impacts

Overall, this project would result in minor impacts to the physical and biological environment in the immediate area, as discussed in Section 7.A through Section 7.I of this EA. However, because all impacts discussed previously are minor or will not occur, the Department determined that any cumulative and secondary impacts associated with the permitted operations would be minor. Air pollution from the facility would be controlled by Department-determined BACT and conditions in Permit #3360-00. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in Permit #3360-00.

In addition, if the plant were to locate in or within 10 km of certain PM_{10} nonattainment areas, the plant would be required to maintain compliance with the requirements contained in Addendum 1 to Permit #3360-00. Addendum 1 incorporates more stringent requirements further reducing the likelihood of minor impact to a given area of operation.

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

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

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

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

The proposed project would not have any effect on cultural uniqueness and diversity of the proposed area of operation. The project is small by industrial standards and operations would typically take place at an existing timber cut area. The predominant use of the surrounding area would not change as a result of the proposed project.

C. Local and State Tax Base and Tax Revenue

The proposed project would have only a minor affect on the local and state tax base and tax revenue. The project is temporary, seasonal, and small by industrial standards, and operations would typically take place in an existing timber cut area requiring no new jobs and minor additional new construction.

D. Agricultural or Industrial Production

Because the proposed project would typically operate in an existing timber cut area, the project would not effect or displace any land used for agricultural production and would not require any additional industrial construction. Further, no additional industrial production would result from the proposed project.

E. Human Health

The proposed project would result in the emission of air pollutants. However, as detailed in Section 7.F of this EA, T.B. Gray would be required to use BACT and maintain compliance with all ambient air quality standards (including secondary standards) as described in Section 7.F of this EA. These standards are designed to be protective of human health. Any health impacts resulting from the proposed project would be minor.

F. Access to and Quality of Recreational and Wilderness Activities

Because the proposed project would take place within an existing timber cut area, the proposed operations would not affect any access to recreational and wilderness activities in the area. Any impact to the quality of recreational and wilderness activities in a given area of operation would be minor.

G. Quantity and Distribution of Employment

Activities from the proposed operations would not affect the quantity and distribution of employment in the area. T.B. Gray would use a few current company employees for the project. No additional employees would be required for facility construction and no new industry employees would result from the proposed project.

H. Distribution of Population

The proposed operations would not disrupt the normal population distribution in the area. Because T.B. Gray would use a few current employees for the proposed project and because operations are temporary and seasonal, the operations at the proposed site location would not require relocation of new people to any given area of operation.

I. Demands of Government Services

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

J. Industrial and Commercial Activity

The proposed project would not affect local industrial and commercial activity because the proposed project would typically operate in an existing timber cut area and would not require any additional industrial construction or result in any additional industrial production.

K. Locally Adopted Environmental Plans and Goals

The proposed project may operate within the Kalispell PM_{10} nonattainment area and would be subject to the Kalispell PM_{10} nonattainment area SIP. Further, if the plant moved to the Columbia Falls area or another area classified as nonattainment for PM_{10} the operation would be required to operate under the provisions of Addendum 1 to Permit #3360-00. The requirements contained in the SIP and Addendum 1 would be protective of the National and Montana Ambient Air Quality Standards and would protect the area from further degradation of air quality as required for designated nonattainment areas.

L. Cumulative and Secondary Impacts

Overall, this project would result in minor impacts to the economic and social environment in the immediate area as discussed in Section 8.A through Section 8.K of this EA. However, because all impacts discussed previously are minor or would not occur, the Department determined that any cumulative and secondary impacts associated with the permitted operations would be minor. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in Permit #3360-00.

In addition, if the plant were to locate in or within 10 km of certain PM_{10} nonattainment areas, the plant would be required to maintain compliance with the requirements contained in Addendum 1 to Permit #3360-00. Addendum 1 incorporates more stringent requirements further reducing the likelihood of minor impact to a given area of operation.

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. In addition, the source would be applying BACT and the analyses indicates compliance with all applicable air quality rules and regulations.

Other groups or agencies contacted or which may have overlapping jurisdiction: Department of Environmental Quality - Air Resources Management Bureau.

Individuals or groups contributing to this EA: Department of Environmental Quality - Air Resources Management Bureau, Montana Historical Society – State Historic Preservation Office.

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