AIR QUALITY PERMIT

Issued to: Montana Limestone Company
P.O. Box 5540
Bismarck, ND 58506-5540

Permit: #2900-05
Application Complete: 02/02/07
Preliminary Determination Issued: 03/02/07
Department's Decision Issued: 03/20/07
Permit Final: 04/05/07
AFS: 009-0003

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

SECTION I: Permitted Facilities

A. Plant Location

Montana Limestone operates a limestone quarrying operation, including limestone removal and handling activities, primary and secondary crushing, screening, and loadout. The location is 19 miles south of Bridger, MT in Sections 24, 25, 19, and 30, Township 8 South, Range 25 and 26 East, Carbon County.

B. Current Permit Action

On November 13, 2006, the Montana Department of Environmental Quality – Air Resources Management Bureau (Department) received a Montana Air Quality Permit (MAQP) application from Montana Limestone for a proposed limestone production increase. The application requested a modification to MAQP #2900-04 to increase limestone production from 850,000 tons per year to 1,700,000 tons per year.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Montana Limestone shall not cause or authorize to be discharged into the atmosphere from any Standards of Performance for New Stationary Sources (NSPS) affected crusher, any visible emissions that exhibit an opacity of 15% or greater averaged over six consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart OOO).

2. Montana Limestone shall not cause or authorize to be discharged into the atmosphere from any other NSPS affected equipment, such as screens or conveyor transfers, any visible emissions that exhibit an opacity of 10% or greater averaged over six consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart OOO).

3. Montana Limestone shall not cause or authorize to be discharged into the atmosphere, from any non-NSPS affected equipment, any visible emissions that exhibit an opacity of 20% or greater averaged over six consecutive minutes (ARM 17.8.308 and ARM 17.8.752).

4. Water and/or chemical dust suppressant shall be available on site at all times and used, as necessary, to maintain compliance with the opacity limitations in Section II.A.1, Section II.A.2, and Section II.A.3 (ARM 17.8.752).

5. Fall distance shall be minimized during the transfer of material to storage piles and during the transfer of material to haul trucks, material traps, hoppers, bins, and conveyors (ARM 17.8.752).

6. Montana Limestone 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 six consecutive minutes and must take reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308 and ARM 17.8.752).

7. Montana Limestone shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.6 (ARM 17.8.749).

8. Maximum limestone production shall be limited to 1,700,000 tons during any rolling 12-month time period (ARM 17.8.749).

9. Montana Limestone shall not operate more than one diesel generator at any given time and the maximum rated design capacity shall not exceed 1,115 kilowatts (kW) (ARM 17.8.749).

B. Testing Requirements

1. Within 60 days after achieving the maximum production rate, but no later than 180 days after Permit #2900-05 is final, an Environmental Protection Agency (EPA) Method 9 opacity test and/or other methods and procedures, as specified in 40 CFR Part 60.675, must be performed on any NSPS-affected equipment to demonstrate compliance with the emissions limitations contained in Sections II.A.1 and II.A.2 (ARM 17.8.105 and ARM 17.8.749).

2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

3. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Montana Limestone shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

   Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. Montana Limestone shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745(1) that would include a change in the 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 emissions unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

3. Montana Limestone shall document, by month, the total limestone production for the facility. By the 25th day of each month, Montana Limestone shall calculate the total limestone 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.8. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

SECTION III: General Conditions

A. Inspection – Montana Limestone shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, auditing any monitoring equipment or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Montana Limestone fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Montana Limestone 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(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 Montana Limestone 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 three years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

Montana Limestone Company
Permit Analysis
Permit #2900-05

I. Introduction and Project Description

A. Permitted Equipment

Montana Limestone Company (Montana Limestone) operates a limestone quarrying operation, including limestone removal and handling activities, primary and secondary crushing, screening, and loadout. The location is 19 miles south of Bridger in Sections 24, 25, 19, and 30, Township 8 South, Range 25 and 26 East, Carbon County.

B. Source Description

Montana Limestone could potentially mine up to 1,700,000 tons of specification limestone each year. The operation includes topsoil and overburden removal, limestone removal (drilling and blasting), crushing (primary and secondary), screening, conveying, and loading. The limestone is used by sugar factories, quick-lime manufacturing companies, electric power plants, and commercial feed customers. Watering and chemical stabilization is used, as necessary, to control fugitive emissions.

C. Permit History

On March 3, 1996, Montana Limestone was issued **Permit #2900-00** for a limestone quarrying operation located south of Bridger, MT. The operation includes the removal and handling activities, primary and secondary crushing, screening, and loadout of limestone.

On March 22, 2000, the permit was modified to clarify that the limitation on production was a facility wide production limit and included both limestone and waste rock production. **Permit #2900-01** replaced Permit #2900-00.

On June 20, 2003, Montana Limestone submitted notification of a change of ownership and address. Montana Limestone was purchased by, and is a subsidiary of, Dakota Coal Company. The permit was updated with this information. Also, the permit format and rule references were updated. **Permit #2900-02** replaced Permit #2900-01.

On December 10, 2003, Montana Limestone submitted a request to the Montana Department of Environmental Quality (Department) for an administrative amendment to modify the primary crusher facility by adding a new screen and feed conveyor. Since the potential emissions from the new sources were less than 15 tons per year, the new equipment was added under Administrative Rules of Montana (ARM) 17.8.745(1). The permit format and rule references were also updated. **Permit #2900-03** replaced Permit #2900-02.

On March 15, 2004, Montana Limestone submitted a request to the Department for an administrative amendment to remove part of Section I.B of this Permit Analysis that states: "*Montana Limestone operates an ash disposal site adjacent to the permitted quarry as a contractor to Yellowstone Energy Limited Partnership (YELP). YELP is the responsible entity with respect to the ash disposal operation, which is not addressed in this permit.*" Montana Limestone does not operate the ash disposal site any longer. **Permit #2900-04** replaced Permit #2900-03.

D. Current Permit Action

On November 13, 2006, the Department received a Montana Air Quality Permit (MAQP) application from Montana Limestone for a proposed limestone production increase. The application requested a modification to MAQP #2900-04 to increase limestone production from 850,000 tons per year to 1,700,000 tons per year. **Permit #2900-05** replaces Permit #2900-04.

E. Additional Information

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

II. Applicable Rules and Regulations

The following are partial quotations of some applicable rules and regulations, which apply to the operation. The complete rules are stated in the 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 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 emissions 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).

   Montana Limestone 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 which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an

emission of air contaminant which 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 the following:

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 17.8.213, Ambient Air Quality Standard for Ozone
5. ARM 17.8.214, Ambient Air Quality Standard for Hydrogen Sulfide
6. ARM 17.8.220, Ambient Air Quality Standard for Settled Particulate Matter
7. ARM 17.8.221, Ambient Air Quality Standard for Visibility
8. ARM 17.8.222, Ambient Air Quality Standard for Lead
9. ARM 17.8.223, Ambient Air Quality Standard for PM_{10}.

Montana Limestone must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 - Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into an outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over six consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emissions sources and that reasonable precautions be taken to control emissions of airborne particulate.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.

5. ARM 17.8.322 Sulfur Oxide Emissions - Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this section.

6. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, NSPS, shall comply with the standards and provisions of 40 CFR Part 60. Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, indicates that NSPS requirements apply to the Montana Limestone facility.

7. ARM 17.8.341 Standard of Performance of Hazardous Air Pollutants. This source shall comply with the standards and provisions of 40 CFR Part 61, as appropriate.

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. Montana Limestone submitted the appropriate permit application fee for the current permit action.

2. ARM 17.8.505 When Permit Required - Exclusions. 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; and 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, as 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 which 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 modification to construct, modify or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. Montana Limestone has a PTE greater than 25 tons per year of particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}); 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. Montana Limestone 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. Montana Limestone submitted an affidavit of publication of public notice for the November 15, 2006, issue of *The Billings Gazette*, a newspaper of general circulation in the city of Billings in Yellowstone County, as proof of compliance with the public notice requirements.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. A BACT review was required for the current permit action. The BACT analysis is discussed 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 Montana Limestone 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 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 one year after the permit is issued.

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

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in

ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).

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

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

a. PTE > 100 tons/year of any pollutant;

b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

c. PTE > 70 tons/year of PM_{10} in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #2900-05 for Montana Limestone, the following conclusions were made:

a. The facility's PTE is less than 100 tons/year for any pollutant (excluding fugitive emissions).

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 subject to a current NSPS (40 CFR 60, Subpart OOO).

e. This facility is not subject to any current National Emission Standards for Hazardous Air Pollutants (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 Montana Limestone is a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V permit, Montana Limestone will be required to obtain a Title V Operating Permit.

III. Best Available Control Technology (BACT) Determination

A BACT determination is required for each new or altered source. Montana Limestone shall install on the new or altered source the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized. The current permit action modifies Permit #2900-04 by allowing a change in operations to increase limestone production from 850,000 tons per year to 1,700,000 tons per year; therefore, a BACT analysis was required for the current permit action.

The Department determined that BACT for the change in operations by increasing the limestone production from 850,000 tons per year to 1,700,000 tons per year is the continuation of emission control techniques currently used at the facility. This includes watering and/or chemical stabilization on the stone crushing and screening operations, material handling operations, storage piles, and haul roads as necessary to maintain compliance with the opacity and reasonable precautions limitations. The Department determined that BACT also includes employing good engineering practices such as minimizing fall distances on material handling operations.

Diesel Generator BACT Analysis

The control options required for the diesel generator/engine that would be used to power the facility are similar to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

Montana Limestone has identified two approaches to reducing overall diesel exhaust emissions: addition of an additive to the diesel fuel and replacement of the engine with a newer, Tier 2 compliant engine. These two alternatives are discussed in the following paragraphs.

Fuel Additives: Over 1500 diesel fuel additives for improving engine performance are registered with the US EPA. Most of these additives improve engine efficiency and reduce emissions of criteria pollutants. The various additives claim to achieve a broad range of emissions reduction efficiencies. Even individual additives report reduction efficiencies as a range of possibly achievable values. Although it would not be appropriate to commit to any specific additive, Montana Limestone will ensure that its diesel fuel contains one or more additives recommended by its fuel suppliers to improve efficiency and reduce pollutant emissions.

Replacement Generator: On July 11, 2006, the US EPA issued a final rule establishing emissions performance standards for stationary compression ignition internal combustion engines (NSPS Subpart IIII, 40 CFR 60.4200, et seq.). That rule requires manufacturers of applicable stationary engines to certify 2007 model engines to meet Tier 2 emission standards established for nonroad (mobile) engines under 40 CFR Parts 89 and 1039. Montana Limestone has the option of replacing the current generator and engine (genset) with a Tier 2 compliant engine as an available emissions control option.

The following table estimates emissions for a comparable sized 2007-model genset based on Tier 2 standards and compares those emission rates with the specification rates for Montana Limestone's existing generator.

Pollutant	T2 [(a)] (g/bhp-hr)	T2 (lb/hr – calculated)	Specification Sheet (lb/hr)
CO	2.6	8.57	3.66
NMHC+NOx [(b)]	4.8	15.82	13.6
PM	0.15	0.49	0.94

(a) For nonroad engines equal to or greater than 560 kW (750 hp). See Federal Register 39184, Volume 71, No. 132, July 11, 2006

(b) Tier 2 limits NMHC+NOx. For specification sheet values, HC and NOx emissions were added to approximate an NMHC+NOx rate.

Note that the existing genset's emissions of CO and combined emissions of NMHC and NOx are lower that the maximum emissions that would be allowed for a similar sized Tier 2 engine. Further, the existing genset's specified maximum PM emission rate is near the Tier 2 limit. From this, Montana Limestone concludes that replacing the existing generator with a Tier 2 compliant genset would provide, at best, negligible benefits. This option is therefore eliminated from consideration as BACT.

SO_2 BACT

Two alternative options were identified specifically for controlling emissions of SO2: use of biodiesel and use of low or ultra-low-sulfur diesel. These are discussed below.

Biodiesel: The use of biodiesel is an alternative control option for reduction of SO2 emissions. It cannot be considered BACT due to technical feasibility concerns related to low temperature use and storage. Additionally, it would potentially result in additional NOx emissions.

Low-Sulfur Fuel: As of October 1, 2007, Montana Limestone will be required per NSPS, Subpart IIII to use diesel fuel with a sulfur content of no more than 500 parts per million (ppm). Montana Limestone currently uses, and will continue to use, ultra-low-sulfur diesel fuel with a maximum sulfur content of 15 ppm. Montana Limestone proposes the use of ultra-low-sulfur diesel fuel as BACT for SO_2 emissions control.

PM BACT

Two alternative options were identified specifically for controlling emissions of particulate matter: a particulate matter trap and proper maintenance and operation. These are discussed below.

Particulate Matter Traps: This type of control equipment is available as a retrofit to control PM emissions from stationary diesel engines. Montana Limestone reports that this technology is up to 85 percent efficient at removing PM and would cost approximately $70,000 to purchase and install. Using these values, and assuming a 4.2-year investment life and a seven percent required rate of return, the cost efficiency of this technology is estimated to be $5,670 per ton of PM removed. Montana Limestone believes this cost is high relative to control costs required of similar facilities. It is therefore eliminated from consideration as BACT for PM.

Proper Maintenance and Operation: The only other available alternative is proper use and maintenance of the engine, including use and maintenance of built-in engine optimization systems. Montana Limestone proposes this, in addition to the use of an EPA-registered fuel additive, as BACT for control of PM emissions.

CO BACT

Two alternative options were identified specifically for controlling emissions of CO: a Diesel Oxidation Converter (DOC) and proper maintenance and operation. These are discussed below.

DOC: DOC's are catalytic oxidizers, or converters, that can be added to the exhaust system of a diesel engine to reduce emissions of CO, VOCs (hydrocarbons), and condensable particulate matter. This technology is capable of achieving up to 99 percent control efficiency. It requires a minimum exhaust temperature of approximately 600°F to operate at full efficiency. Montana Limestone has indicated that it is very likely the existing genset does not operate continuously at conditions that would result in exhaust temperatures above 500°F. For that reason, this technology is deemed technically infeasible and is eliminated from consideration as BACT.

Proper Maintenance and Operation: The only other available alternative is proper use and maintenance of the engine, including use and maintenance of built-in engine optimization systems. Montana Limestone proposes this, in addition to the use of an EPA-registered fuel additive, as BACT for control of CO emissions.

NOx BACT

Two alternative options were identified specifically for controlling emissions of NOx: a Selective Catalytic Reduction (SCR) system and proper maintenance and operation. These are discussed below.

SCR: An SCR chemically reduces nitrogen oxides to nitrogen and water in the presence of ammonia or urea and a catalyst. Montana Limestone reports that this technology is up to 97 percent efficient at removing NOx, but typically achieves between 70 to 90 percent reduction. For the purpose of this analysis, a control efficiency of 80 percent was assumed to account of efficiency reductions due to low-temperature exhaust conditions. The system is estimated to

cost approximately $190,000 per year. Using these values, and assuming a 4.2-year investment life and a seven percent required rate of return, the cost efficiency of this technology is estimated to be $4,700 per ton of NOx removed. Montana Limestone believes this cost is high relative to control costs required of similar facilities. It is therefore eliminated from consideration as BACT for NOx.

Proper Maintenance and Operation: The only other available alternative is proper use and maintenance of the engine, including use and maintenance of built-in engine optimization systems. Montana Limestone proposes this, in addition to the use of an EPA-registered fuel additive, as BACT for control of NOx emissions.

IV. Emission Inventory

Emissions Summary (tons/year)							
Source	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NOx**	**CO**	**VOC**
Quarry Operations[1]	20.20	7.77	1.17	---	---	---	---
Mobile Sources	53.09	26.54	2.65	0.0	0.43	0.12	0.02
Pile Erosion[2]	12.39	6.19	0.46	---	---	---	---
Processing Equipment[3]	10.54	3.77	0.43	---	---	---	---
Diesel Generator	4.11	4.11	4.11	3.80	58.03	16.03	1.53
Totals:	100.32	48.39	8.83	3.80	58.46	16.14	1.55

[1] Ore removal, ore dumping, front end loader to truck, drilling, blasting, waste loading/dumping, new disturbed area
[2] Limestone storage piles
[3] Jaw crusher, cone crusher, scalper screen, B screen, C screen, material transfers (HP1 to CV1, CV3 to CV4, CV7 to CV4, CV5 to CV6, CV10 to CV11, CV11 to CV12, CV12 to CV13, PL6 to CV14, TR1 to HP1, CV13 to PL6, CV14 to TR7)

Note: A complete emission inventory for Permit #2900-05 is on file with the Department.

V. Existing Air Quality

No air quality monitoring has been done in the area. Air pollutant levels are assumed to be similar to background levels for rural Montana areas. Based on the low level of pollutant emissions, the impact to ambient air quality should be minimal.

VI. 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.

VII. Environmental Assessment

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

Permit Analysis Prepared by: Eric Thunstrom
Date: February 20, 2007

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 For: Montana Limestone Company
P.O. Box 5540
Bismarck, ND 58506-5540

Air Quality Permit Number: 2900-05

Preliminary Determination Issued: March 02, 2007
Department Decision Issued: March 20, 2007
Permit Final: April 5, 2007

1. *Legal Description of Site:* Montana Limestone operates a limestone quarrying operation, including limestone removal and handling activities, primary and secondary crushing, screening, and loadout. The location is 19 miles south of Bridger, Montana in Sections 24, 25, 19, and 30, Township 8 South, Range 25 and 26 East, Carbon County.

2. *Description of Project:* Montana Limestone submitted a permit application to modify Permit #2900-04 by allowing an increase in limestone production from 850,000 tons per year to 1,700,000 tons per year.

3. *Objectives of the Project:* The issuance of Permit #2900-05 would allow Montana Limestone to increase limestone production from 850,000 tons per year to 1,700,000 tons per year.

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 Montana Air Quality permit to the facility. However, the Department does not consider the "no-action" alternative to be appropriate because Montana Limestone 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 #2900-05.

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;
B. Water Quality, Quantity, and Distribution;
C. Geology and Soil Quality, Stability, and Moisture;
D. Vegetation Cover, Quantity, and Quality; and
E. Aesthetics

Overall impacts to the physical and biological environmental parameters noted above would be minor because the activities would occur within the current mining area with little or no additional surface disturbance. Furthermore, the current permit action would allow a limestone production increase to occur within the currently approved mine plan area. This would result in a relatively small increase in air pollutant emissions above those associated with the current mining rate. In the maximum emission scenario, there would be a particulate emission increase of less than 10 percent above the current permitted level. All of the increase would be fugitive emissions. There would be a small increase in air pollutant deposition in the area and in the use of water for dust suppression. Overall, the demands and impacts to terrestrial and aquatic life and habitats; water quality, quantity, and distribution; geology and soil quality, stability, and moisture; vegetation cover, quantity, and quality; and aesthetics related to the increased activities would be minor.

F. Air Quality

The air quality impacts from the increased activities would be minor because Permit #2900-05 would include conditions limiting the visible emissions (opacity) from the plant operations, and would require water and/or chemical dust suppressant and other means to control air pollution. The plant operations would continue to be limited by Permit #2900-05 to total emissions of 250 tons per year or less from non-fugitive sources, including any additional equipment used at the site. This facility would continue to be considered a minor source of air pollution for the Title V program, because the facility's potential emissions would be below 100 tons per year. Overall, air emissions from the increased activities would have minor impacts on air quality in the immediate and surrounding area because of the relatively small amount of additional pollutants generated. Air pollution controls currently used at the facility, such as enclosures, chemical stabilization and/or water suppression, would reduce air emissions from equipment operations, storage piles, and haul roads.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The increased activities associated with the limestone production increase would occur within the previously disturbed industrial site at the mine. As part of the MEPA analysis on initial mine development, assessments of potential impacts to unique endangered, fragile, or limited environmental resources were done by the Department, including contact with the Montana Natural Heritage Program – Natural Resource Information System (NRIS) to identify species of special concern at the mine site. The likelihood that the increased limestone production would impact unique endangered, fragile, or limited environmental resources would be minor because of the relatively small increase in emissions, the lack of change to the mine plan area, and the conditions placed in Permit #2900-05.

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

The increased activities would require minimal additional amounts of water, air, and energy. Limited amounts of water would be required to be used for dust control for the equipment, product stockpiles, and surrounding haul roads. Further, as described in Section 7.F. of this EA, pollutant emissions generated from the operation would have minimal impacts on air quality in the immediate and surrounding area because of the relatively small increase in emissions, the lack of change to the mine plan area, and the conditions placed in Permit #2900-05. Overall, the demands and impacts to the environmental resource of water, air, and energy related to the increased activities would be minor.

I. Historical and Archaeological Sites

The increased activities would occur within the previously disturbed industrial site at the mine. According to past correspondence from the Montana State Historic Preservation Office, there is low likelihood of adverse disturbance to any known archaeological or historic site because of previous industrial disturbance within the area. Therefore, the likelihood that the increased activities would have an impact on historical or archaeological sites would be minor.

J. Cumulative and Secondary Impacts

The increased activities from the project would cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment. There would be a relatively small increase in air emissions of particulate matter and PM_{10} and no increase in the mine plan area.

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 Department determined that the current permit action would not have an impact on the social structures and mores or the cultural uniqueness and diversity of this area of operation because the increase in limestone production and associated mining activities would occur within the previously disturbed industrial area. The surrounding area would remain unchanged as a result of the proposed project.

C. Local and State Tax Base and Tax Revenue

The increased activities would have little or no impact on the local and state tax base and tax revenue. No full time, permanent employees would be added as a result of issuing Permit #2900-05. The increase in the amount of equipment at the site would be minimal.

D. Agricultural or Industrial Production

The increased activities would occur within the previously disturbed industrial area; therefore, the Department would not expect an impact to or displacement of agricultural production. The increased activities would be relatively small compared to the existing mining operation and would have only a minor impact on local industrial production. In addition, the facility would operate within the permitted mining area, which upon completion of mining operations, would be reclaimed, as specified, by the Environmental Management Bureau (EMB) of the Department. Minor and temporary effects may occur to agricultural land, and the EMB would be responsible for oversight of any reclamation activities. Therefore, impacts to agricultural or industrial production would be minor.

E. Human Health

Permit #2900-05 would incorporate conditions to ensure that the increased activities would be accomplished in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As noted in Section 7.F. of this EA, the air emissions from this facility would be minimized by enclosures, water spray and/or chemical stabilization, and opacity limitations. Furthermore, the increased activities and resulting air emissions would be relatively small. Therefore, any associated impacts to human health would be minor based as a result of compliance with the applicable standards and operational conditions and limitations incorporated within the permit.

F. Access to and Quality of Recreational and Wilderness Activities

The increased activities would occur within the previously disturbed industrial property and would not impact access to recreational and wilderness activities. Minor impacts on the quality of recreational activities could be created from the noise from the increased activities; however, these would be small in comparison to existing activities. Emissions from the operation would be minimized as a result of the conditions that would be placed in Permit #2900-05. Therefore, the associated impacts on the access to and quality of recreational and wilderness activities would be minor.

G. Quantity and Distribution of Employment; and
H. Distribution of Population

As a result of the relatively small size of the operations associated with the increased activities, the quantity and distribution of employment and the distribution of population in the area would not be impacted. No full time, permanent employees would be added as a result of issuing Permit #2900-05 and no related secondary employment would be expected. Therefore, no impacts to the distribution of population in the area would be expected.

I. Demands of Government Services

Minor increases may be observed in the local traffic on existing roads in the area. Very limited additional government services would be required relative to these operations. Overall, demands for government services would be minor.

J. Industrial and Commercial Activity

The increased activities would represent only a minor increase in the industrial activity in the area because the increase in limestone production and associated mining activities would occur within the previously disturbed industrial property. No additional commercial activity

would result because no secondary activities are expected to move to the area as a result of the increased activities. Overall, only a minor increase in industrial and commercial activity would be expected as a result of the proposed project.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans or goals that would be affected by the proposed project. The state standards would protect the proposed site and the environment surrounding the site.

L. Cumulative and Secondary Impacts

The increased activities would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area because of the small increase in potential air emissions. Increases in traffic would have minor impacts on the local traffic in the immediate area. Because the project would be a relatively small increase of particulate emissions, only minor economic impacts to the local economy would be expected. New businesses would not be drawn to any areas and permanent jobs would not be created or lost as a result of the proposed project. Overall, the proposed project would have minor impacts to the cumulative and secondary impacts to the social and economic aspects of the human environment.

Recommendation: An Environmental Impact Statement (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 the proposed increase in activities are minor; therefore, an EIS is not required. In addition, the source would be applying the Best Available Control Technology and the analysis indicates compliance with all applicable air quality rules and regulations.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Department of Environmental Quality - Permitting and Compliance Division; Montana Natural Heritage Program; and State Historic Preservation Office.

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

EA prepared by: Eric Thunstrom
Date: February 20, 2007