Montana Department of
ENVIRONMENTAL QUALITY

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November 7, 2014

Mike Jones
Montana Limestone Company
P.O. Box 5540
Bismarck, ND 58506-5540

Dear Mr. Jones:

The Department of Environmental Quality (Department) has made its decision on the Montana Air Quality Permit application for the additional crusher at the limestone facility. The application was given permit number 2331-03. The Department's decision may be appealed to the Board of Environmental Quality (Board). A request for hearing must be filed by November 24, 2014. This permit shall become final on November 25, 2014, unless the Board orders a stay on the permit.

Procedures for Appeal: Any person jointly or severally adversely affected by the final action may request a hearing before the Board. Any appeal must be filed before the final date stated above. The request for a hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, Montana 59620.

Conditions: See attached.

For the Department,

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

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

JM:CH
Enclosure

MONTANA AIR QUALITY PERMIT

Issued to:	Montana Limestone Company P.O. Box 5540 Bismarck, ND 58506-5540	Permit #2331-03 Application Complete: 09/17/2014 Preliminary Determination Issued: 10/22/2014 Department's Decision: 11/7/2014 Permit Final: AFS#: 009-0001

An air quality permit, with conditions, is hereby granted to 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's limestone processing facility is located in Section 16, Township 9 South, Range 25 East, near Warren, Montana, in Carbon County.

B. Current Permit Action

On August 11, 2014, Montana Limestone submitted a request to the Department of Environmental Quality – Air Resources Management Bureau (Department) for a modification to the existing facility. An incompleteness letter was sent to Montana Limestone on September 5, 2014, and additional information related to the incompleteness letter was received on September 17, 2014. Under the proposed action, Montana Limestone would install a new secondary crusher to allow resizing of existing limestone product.

Section II: Limitations and Conditions

A. Emission Limitations

1. All visible emissions from any Standards of Performance for New Stationary Sources (NSPS)-affected crusher shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

   - For crushers that commence construction, modification, or reconstruction on or after April 22, 2008: 12% opacity.

   - For crushers that commence construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 15% opacity.

2. All visible emissions from any other NSPS-affected equipment, other than a crusher (such as screens or conveyor transfers), shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

    - For equipment that commences construction, modification, or reconstruction on or after April 22, 2008: 7% opacity

    - For equipment that commences construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 10% opacity.

3. Montana Limestone shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

4. Montana Limestone 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).

5. Montana Limestone shall treat all unpaved portions of the haul roads, access roads, parking lots, and 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.4 (ARM 17.8.308).

6. Montana Limestone shall comply with all applicable standards and limitations and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart OOO (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

B. Testing Requirements

1. Within 60 days after achieving maximum production, but no later than 180 days after initial start-up, an Environmental Protection Agency (EPA) Method 9 opacity test and/or other methods and procedures, as specified in 40 CFR 60.675 must be performed on all NSPS-affected equipment to demonstrate compliance with the emission limitations contained in Sections II.A.1 and II.A.2 (ARM 17.8.340 and 40 CFR 60, Subpart A and Subpart OOO).

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 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 to calculate 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, that would include ***the addition of a new emissions unit,*** change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).

3. All records compiled in accordance with this permit must be maintained by Montana Limestone as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

D. Notification

Montana Limestone shall provide the Department with written notification of the actual start-up date of the secondary crusher postmarked within 15 days after the actual start-up date (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 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 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 action as specified in Section 75-2-401, *et seq*., MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, 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. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

Montana Air Quality Permit (MAQP) Analysis
Montana Limestone Company.
MAQP# 2331-03

I. Introduction/Process Description

A. Permitted Equipment

Montana Limestone Company (Montana Limestone) operates a Fine Grind Mill near Warren, Montana, in Carbon County. This facility includes a primary mill, new secondary crusher (referred to as a pin mill in the MAQP application) and associated baghouse.

B. Source Description

The Montana Limestone Fine Grind Mill further processes limestone product that is obtained from the Montana Limestone quarry located east of Warren, Montana. This facility is located in Section 16, Township 9 South, Range 25 East, near Warren Montana in Carbon County.

C. Permit History

On January 14, 1987, Big Horn Transportation Company submitted a permit application to operate a hydraulic/gravity separation wash plant for an open-pit placer mining operation. **Permit #2331** was issued by the Department of Environmental Quality (Department) on May 8, 1987.

On July 13, 2000, Big Horn Transportation Company requested that the Department transfer Permit #2331 from the Big Horn Transportation Company to Montana Limestone. The Department updated the permit to reflect that change and updated the permit format and rule references. Permit **#2331-01** replaced Permit #2331.

On June 20, 2003, Montana Limestone submitted a request to the Department for an administrative amendment to clarify that Montana Limestone was purchased by, and is a subsidiary of, Dakota Coal Company with a corresponding change of address. The permit format and rule references have also been updated, which included the correction of the rule reference for Standards of Performance for New Stationary Sources (NSPS) applicability. The correct reference in the permit is 40 CFR 60, Subpart OOO, Nonmetallic Mineral Processing Plants, rather than Subpart LL. Permit **#2331-02** replaced Permit #2331-01

D. Current Permit Action

On August 11, 2014, Montana Limestone submitted a request to the Department of Environmental Quality – Air Resources Management Bureau (Department) for a modification to the existing facility. Under the proposed action, Montana Limestone would install a new secondary crusher (pin mill) to allow resizing of existing limestone product. The new crusher would compliment the existing primary crusher and allow resizing of material from the primary crusher. **MAQP #2331-03** replaces MAQP #2331-02.

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

A. ARM 17.8, Subchapter 1 - General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

   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 four (4) hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals, or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

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

1. ARM 17.8.204 Ambient Air Monitoring;
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide;
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide;
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide;
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone;
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide;
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter;
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility;
9. ARM 17.8.222 Ambient Air Quality Standard for Lead; and
10. 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 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. (2) Under this rule, Montana Limestone shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

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

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

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. (4) Commencing July 1, 1972, no person shall burn liquid or solid fuels containing sulfur in excess of one pound of sulfur per MMBtu fired. (5) Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions. Montana Limestone will burn natural gas in its fuel burning equipment, which will meet this limitation.

6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.

7. ARM 17.8.340 Standards 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).

   a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:

   b. 40 CFR 60, Subpart OOO – Nonmetallic Mineral Processing Plants.

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. Montana Limestone shall 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. The current permitting action is considered an administrative action; therefore, an application fee is not required.

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; 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, 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 asphalt concrete plant, mineral crusher, or mineral screen that has the

potential to emit (PTE) greater than 15 tons per year (TPY) of any pollutant. Montana Limestone has the potential to emit more than 25 tons per year of 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. This rule requires that a permit application be submitted prior to installation, alteration 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 August 14, 2014, issue of the *Carbon County News*, a newspaper of general circulation in the Town of Red Lodge in Carbon County, as proof of compliance with the public notice

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

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this Permit Analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving 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 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 MAQP may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.

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

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

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

   This facility is not a major stationary source because this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant.

G. ARM 17.8, Sub-Chapter 12 - Operating Permit Program, 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. Potential to Emit (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. 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 #2331-03 for the Montana Limestone facility, 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 of any one HAP, and less than 25 tons/year of a combination of all HAPs.

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

   d. The facility is subject to a current NSPS; 40 CFR 60, Subpart OOO.

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

   f. This source is not a Title IV affected source, or a solid waste combustion unit.

   g. The facility 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 Operating permit in the future, Montana Limestone will be required to obtain a Title V Operating Permit.

III. BACT Determination

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

Montana Limestone provided a BACT analysis for the new secondary crusher. The analysis included three control options including covered equipment with baghouse, a foam spray system or water spray system to control particulate emissions from the new secondary crusher. Each of the foam and water spray alternatives would introduce moisture to the

process which is undesirable. The third option of using covered equipment and using a baghouse was proposed and accepted as BACT for the modification. An existing baghouse already used at the facility can be used for the new secondary crusher as the primary crusher and secondary crusher would not operate simultaneously. Therefore, use of the existing baghouse with an estimated control efficiency of 99% and operating covered equipment is accepted as BA CT.

IV. Emission Inventory

Table 1 shows the updated emission inventory for the facility.

TABLE 1. PARTICULATE EMISSION INVENTORY

	Emissions Tons/Year [PTE]							
Emission Source	PM	PM_{10}	$PM_{2.5}$	$PM_{Cond.}$	CO	NO_x	SOx	VOC
Primary Crusher (Uncontrolled)	1.18	0.53	0.02					
Secondary Crusher (Controlled)	1.36	0.53	0.02					
Truck Unloading (Assume all material is unloaded and processed in primary crusher)	0.004	0.004	--					
Screens (Total of Three)	1.45	0.49	0.03					
Transfer Points (Assume 20 Transfer Points All Controlled)	0.61	0.20	0.06					
Unpaved Roadways (Haul Roads)	5.39	1.49	0.15					
EMISSIONS (Excluding Haul Roads)	4.60	1.74	0.13		0.00	0.00	0.00	0.00

CO, carbon monoxide				
NO_X, oxides of nitrogen				
PM, particulate matter				
PM_{10}, particulate matter with an aerodynamic diameter of 10 microns or less				
$PM_{2.5}$, particulate matter with an aerodynamic diameter of 2.5 microns or less				
PM_{Cond}, Condensable particulate matter				
SO_2, oxides of sulfur				
TPY, tons per year				
VOC, volatile organic compounds				

Montana Limestone

Primary Crusher	(Uncontrolled)				
Process Rate:	50	ton/hr	(Primary Crusher)		
Operating Hours	8760	hours/year			
PM Emissions:					
Emission Factor	0.0054	lbs/ton	[AP-42 Table 11.17.2-2 8/04]		
Calculations	(0.0054 lbs/ton) * (50.00 ton/hour) =			0.27	lbs/hr
	(0.27 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			1.18	TPY
PM_{10} Emissions:					
Emission Factor	0.0024	lbs/ton	[AP-42 Table 11.19.2-2 8/04]		
Calculations	(0.0024 lbs/ton) * (50.00 ton/hour) =			0.12	lbs/hr
	(0.12 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.53	TPY
$PM_{2.5}$ Emissions:					
Emission Factor	0.0001	lbs/ton	[AP-42 Table 11.19.2-2 8/04]		
Calculations	(0.0001 lbs/ton) * (50.00 ton/hour) =			0.01	lbs/hr
	(0.01 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.02	TPY

Secondary Crusher (Controlled)					
Process Rate:	50	ton/hr	(Second crusher, Run at rating of primary)		
Operating Hours	8760	hours/year			
PM Emissions:					
Emission Factor	0.62	lbs/ton	[AP-42 Table 11.17-4 2/98]		
Calculations	(0.62 lbs/ton) * (50.00 ton/hour) =			31.00	lbs/hr
	(31.00 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			135.78	TPY
				0.31	(lbs/hr Controlled)
				1.36	(TPY Controlled)
PM_{10} Emissions:					
Emission Factor	0.0024	lbs/ton	[AP-42 Table 11.19.2-2 8/04]		
Calculations	(0.0024 lbs/ton) * (50.00 ton/hour) =			0.12	lbs/hr (Controlled)
	(0.12 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.53	TPY (Controlled)

$PM_{2.5}$ Emissions:						
Emission Factor	0.0001	lbs/ton	[AP-42 Table 11.19.2-2 8/04]			
Calculations	(0.0001 lbs/ton) * (50.00 ton/hour) =			0.01	lbs/hr	(Controlled)
	(0.01 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.02	TPY	(Controlled)

Truck Unloading (Assume all material is unloaded that can be processed in the crusher)

Process Rate:	50.0	ton/hr (Assumes primary crusher sets throughput)			
Operating Hours	8760	hours/year			
PM_{10} Emissions:					
Emission Factor	0.000016	lbs/ton	[AP-42 Table 11.19.2-2 8/04]		
Calculations	(0.000016 lbs/ton) * (50.00 ton/hour) =			0.0008	lbs/hr
	(0.001 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.00350	TPY

Screening

Process Rate:	150	ton/hr	(Three Screens)		
Operating Hours	8760	hours/year			
PM Emissions:			(Screening controlled)		
Emission Factor	0.00220	lbs/ton	[AP-42 Table 11.19.2-2 8/04]		
Calculations	(0.0022 lbs/ton) * (150.00 ton/hour) =			0.33	lbs/hr
	(0.33 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			1.45	TPY
PM_{10} Emissions:					
Emission Factor	0.00074	lbs/ton	[AP-42 Table 11.19.2-2 8/04]		
Calculations	(0.00074 lbs/ton) * (150.00 ton/hour) =			0.11	lbs/hr
	(0.11 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.49	TPY
$PM_{2.5}$ Emissions:					
Emission Factor	0.00005	lbs/ton	[AP-42 Table 11.19.2-2 8/04]		
Calculations	(0.00005 lbs/ton) * (150.00 ton/hour) =			0.01	lbs/hr
	(0.01 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.03	TPY

Transfer Points (Assume 20 Transfer Point that are Controlled and includes Loading Transfer Points)

Process Rate:	1000	ton/hr (total of stacker and conveyors each handling 50 tph)
Operating Hours	8760	hours/year

PM Emissions:			(Conveyor Transfer Points)		
Emission Factor	0.00014	lbs/ton	[AP-42 Table 11.19.2-2 8/04]		
Calculations	(0.00014 lbs/ton) * (1,000.00 ton/hour) =			0.14	lbs/hr
	(0.14 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.61	TPY

PM_{10} Emissions:

Emission Factor	0.000046	lbs/ton	[AP-42 Table 11.19.2-2 8/04]		
Calculations	(0.000046 lbs/ton) * (1,000.00 ton/hour) =			0.05	lbs/hr
	(0.05 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.20	TPY

$PM_{2.5}$ Emissions:

Emission Factor	0.000013	lbs/ton	[AP-42 Table 11.19.2-2 8/04]		
Calculations	(0.000013 lbs/ton) * (1,000.00 ton/hour) =			0.01	lbs/hr
	(0.01 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) =			0.06	TPY

Unpaved Roadways (Haul Roads)

Emission Factor: $EF = k(s/12)^{a} * (W/3)^{b}$ [AP-42 13.2.2.2, 11/06]

EF, Emission Factor = lbs Emitted Per Vehicle Mile Traveled (VMT)

k, Empirical Constant PM =	4.9	[AP-42 Table 13.2.2-2, 11/06]
k, Empirical Constant PM_{10} =	1.5	[AP-42 Table 13.2.2-2, 11/06]
k, Empirical Constant $PM_{2.5}$ =	0.15	[AP-42 Table 13.2.2-2, 11/06]
s, Surface Material Silt Content (%) =	7.1	[AP-42 Table 13.2.2-1, 11/06]
W, Mean Vehicle Weight (tons) =	48	[Estimated]
a, Empirical Constant PM =	0.7	[AP-42 Table 13.2.2-2, 11/06]
a, Empirical Constant PM_{10} and $PM_{2.5}$ =	0.9	[AP-42 Table 13.2.2-2, 11/06]
b, Empirical Constant PM , PM10 and $PM_{2.5}$ =	0.45	[AP-42 Table 13.2.2-2, 11/06]

PM Emissions(uncontrolled): PM30

Emission Factor	EF = 4.9 * (7.1/12)^0.7 * (48/3)^0.45 =	11.82	lbs/VMT	
Calculations	(11.82 lbs/VMT) * (5 miles/day) =		59.08	lbs/day
	(59.08 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =		10.78	TPY
	50% Control Efficiency		5.39	TPY

PM_{10} Emissions(uncontrolled):

Emission Factor	EF = 1.5 * (7.1/12)^0.9 * (48/3)^0.45 =	3.26	lbs/VMT	
Calculations	(3.26 lbs/VMT) * (5 miles/day) =		16.28	lbs/day
	(16.28 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =		2.97	TPY
	50% Control Efficiency		1.486	TPY

$PM_{2.5}$ Emissions(uncontrolled):

Emission Factor Calculations	EF = 0.15 * (7.1/12)^0.9 * (48/3)^0.45 =	0.33	lbs/VMT	
	(0.33 lbs/VMT) * (5 miles/day) =		1.63	lbs/day
	(1.63 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =		0.30	TPY
	50% Control Efficiency		0.15	TPY

V. Existing Air Quality

The air quality classification for the area is "Better than National Standards" or unclassifiable attainment for the National Ambient Air Quality Standards for criteria pollutants. There are no non-attainment areas within a reasonable distance from the site. The current permit action will not affect the existing air quality of the area.

VI. Ambient Air Impact Analysis

Because controlled emissions from this permitting action would exhibit good dispersion characteristics and would not exceed any Montana ambient air quality modeling threshold, the Department determined that controlled emissions from the source will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

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

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

VIII. Environmental Assessment

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

Analysis Prepared By: Craig Henrikson
Date: August 25, 2014

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

FINAL ENVIRONMENTAL ASSESSMENT (EA)

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

Montana Air Quality Permit Number (MAQP): 2331-03

Preliminary Determination Issued: October 22, 2014
Department Decision Issued: November 7, 2014
Permit Final:

1. *Legal Description of Site*: Montana Limestone's limestone processing facility is located in Section 16, Township 9 South, Range 25 East, near Warren, Montana, in Carbon County.

2. *Description of Project*: Montana Limestone, proposes to add a secondary crusher to the existing facility. The secondary crusher will allow the facility to resize oversize limestone material and sell product into different markets.

3. *Objectives of Project*: The objective of the modification is to manufacture different size limestone products to improve facility profitability.

4. *Alternatives Considered*: In addition to the proposed action, the Department of Environmental Quality (Department) also considered the "no-action" alternative. The "no-action" alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because 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 list of enforceable conditions, including a Best Available Control Technology (BACT) analysis, is included in MAQP #2331-03.

6. *Regulatory Effects on Private Property*: The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

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

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

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

A. Terrestrial and Aquatic Life and Habitats

The proposed site modification would occur within an existing building and not require land disturbance for construction. Additionally, minimal additional emissions would occur because the secondary crusher runtime would replace time previously used by the primary crusher. The Department has determined that any impacts from emissions or deposition of pollutants would not occur due to the dispersion characteristics of the pollutants, the atmosphere, and because the project does not result in any new emissions.

B. Water Quality, Quantity and Distribution

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

C. Geology and Soil Quality, Stability and Moisture

The proposed facility modification would not be expected to have any impact on geology and soil quality, stability, and moisture because the facility is an existing facility. No impacts to the geology and soil quality, stability, and moisture from facility construction would occur due to the facility modification.

D. Vegetation Cover, Quantity, and Quality

The project would not likely have any effect on the local vegetation. The impacts from emissions or deposition of pollutants would not change as the permitted emissions do not change under the proposed project.

E. Aesthetics

The proposed project would not have any effect on the local aesthetics. Since the facility already exists, adding a second crusher would not be expected to have an impact.

F. Air Quality

The area surrounding the proposed project is unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for all criteria air pollutants. Emissions of air pollutants would likely decrease as a result of the permit action; however, MAQP #2331-03 contain conditions limiting opacity and minimize airborne dust through the use of water or chemical dust suppressants and to operate pollution control equipment. Compliance with all the permit conditions would ensure that effects to the local air quality would improve as the project would result in a decrease in actual emissions.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The proposed project would not have any impacts on unique endangered, fragile, or limited environmental resources because permitted emissions are unchanged. The Department believes that no impacts due to the relatively small amount of the above listed pollutants emitted, dispersion characteristics of the pollutants and the atmosphere, and conditions placed in MAQP #2331-03, including, but not limited to, BACT requirements discussed in Section III of the permit analysis for this permit.

The Montana Natural Heritage Program (MNHP), Natural Resource Information System (NRIS) earlier identified no occurrences of species of concern within the vicinity of the proposed project location that are classified either as sensitive, special status, or without classification. Since the project would result in no change in permitted emissions, a new NRIS search was not conducted.

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

The proposed project would have a minor impact on environmental resources of water, air, and energy. Water may be required to continue to control dust from the access roads and overall plant area. The addition of a secondary crusher with baghouse control would provide minimal emissions increase. The Department has determined that any impacts

from emissions or deposition of pollutants would be minor due to the dispersion characteristics of the pollutants, the atmosphere, and the conditions contained in MAQP #2331-03.

I. Historical and Archaeological Sites

The Department earlier contacted the Montana Historical Society, State Historical Preservation Office (SHPO) at initial permit issuance in an effort to identify any historical and archaeological sites that may be present in the area of operation. Since the facility already exists, no impacts upon historical or archaeological sites would be expected as a result of this permitting action.

J. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts from this project on the physical and biological environment in the immediate area would be minor due to the relatively small size and potential environmental impact from all operations at the site. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in MAQP #2331-03.

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

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

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

A. Social Structures and Mores

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

Additional activity (vehicle traffic, construction equipment, etc.) may be noticeable during addition of the project construction. Once the facility modification is complete, activities associated with the operation of the facility would be minor. Overall, any impacts to the social structures and mores in the area would be minor.

B. Cultural Uniqueness and Diversity

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

C. Local and State Tax Base and Tax Revenue

The proposed project would result in only minor impacts to the local and state tax base and tax revenue because the small scope of the proposed project. In addition, only minor amounts of construction would be needed to complete the project; therefore, any construction related jobs would be temporary and the impacts from the construction jobs would be temporary.

D. Agricultural or Industrial Production

The land surrounding the existing facility location would be unchanged from the proposed project. However, because the facility expansion would be relatively small and within the existing site, the proposed project would result in no impacts to agricultural production. The proposed project would have minor impacts to industrial production because the proposed project would diversify the product mix provided by the facility.

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

E. Human Health

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

F. Access to and Quality of Recreational and Wilderness Activities

The proposed project would have minor, if any, impacts on access to recreational and wilderness activities because of the relatively remote location and the relatively small size of the proposed project. The project would have no impacts on the quality of recreational and wilderness activities in the area because the facility is existing and would not result in additional impacts. Overall any impacts to the access and quality of recreational and wilderness activities in the area would not occur.

G. Quantity and Distribution of Employment

The proposed project would have minor, if any, impacts on the quantity and distribution of employment because no permanent employees would be hired for the proposed project. In addition, temporary construction-related positions may result from this project but any impacts to the quantity and distribution of employment from construction related employment would be minor due to the relatively small size of the facility and the corresponding relatively short time period that would be associated with making the modification.

H. Distribution of Population

The proposed project would have minor, if any, impacts on the distribution of population in the area because the facility modification would be located in a relatively remote location and the proposed project would not require a permanent employee to operate the facility. Therefore, no people would be moving to the area for employment opportunities.

I. Demands for Government Services

There would be minor impacts on the demands for government services because additional time would be required by government agencies to issue MAQP #2331-03 and to assure compliance with applicable rules, standards, and conditions that would be contained in those permits. There would like be an increase in vehicle traffic primarily during the facility modification. Vehicle traffic during construction would be minor due to the relatively short time period that would be required to perform the modification. Overall, any demands for government services to regulate the facility or activities associated with the facility would be minor due to the relatively small size of the facility expansion.

J. Industrial and Commercial Activity

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

K. Locally Adopted Environmental Plans and Goals

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

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from this project would result in minor impacts to the economic and social aspects of the human environment in the immediate area. Due to the relatively small size of the facility modification, the industrial production, employment, and tax revenue (etc.) changes resulting from the proposed project would be minor. In addition, the Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in MAQP #2331-03.

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

The current permitting action is for the addition of a secondary crusher (pin mill) at the existing facility. MAQP #2331-03 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

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

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

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