August 17, 2018

Joseph Brewer
JCBrewer Inc. dba Columbus Concrete
P.O. Box 147
Columbus, MT 59019

Dear Mr. Brewer:

Montana Air Quality Permit #3379-02 is deemed final as of August 17, 2018, by the Department of Environmental Quality (Department). All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

Julie A. Merkel
Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-3626

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

JM:CH
Enclosure

Montana Department of Environmental Quality
Air, Energy & Mining Division

Montana Air Quality Permit #3379-02

JCBrewer Inc. dba Columbus Concrete
P.O. Box 147
Columbus, MT 59019

August 17, 2018

MONTANA AIR QUALITY PERMIT

Issued To: JCBrewer Inc. dba Columbus Concrete
P.O. Box 147
Columbus, MT 59019

MAQP: #3379-02
Administrative Amendment (AA):
Request Received: 07/09/2018
Department's Decision Issued: 08/01/2018
Permit Final: 8/17/2018

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to JCBrewer Inc. dba Columbus Concrete, hereinafter referred to as "Columbus" 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

Columbus owns and operates a portable truck-mix concrete batch plant operation, which is initially located in Section 20, Township 2 South, Range 20 East, in Stillwater County, Montana. However, MAQP #3379-02 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas. A Missoula County air quality permit will be required for locations within Missoula County, Montana. An addendum will be required for locations in or within 10 km of certain PM_{10} nonattainment areas.

B. Current Permit Action

On July 9, 2018, the Department received a request from Columbus to transfer ownership from John Counter to Joseph Brewer (JCBrewer Inc dba Columbus Concrete). The current permit action transfers the permit from John Counter to Joseph Brewer and updates the contact information to reflect the change in ownership.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Columbus shall install, operate, and maintain a fabric filter dust collector, and a rubber boot load-out spout as specified in their MAQP and all supporting documentation (ARM 17.8.752):

    a. Columbus shall install, operate, and maintain the fabric filter dust collector to control particulate emissions on every cement and cement supplement silo ventilation opening; and

b. Columbus shall install, operate, and maintain a rubber boot load-out spout to control particulate emissions on every product loadout opening on the portable concrete plant, where cement and aggregate materials are transferred for mixing.

2. Columbus shall not cause or authorize to be discharged into the atmosphere from the portable concrete batch plant:).

a. Any vent emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 and ARM 17.8.752).

b. Any fugitive emissions from the source or from any material transfer operations, including, but not limited to, truck loading or unloading, which exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.308 and ARM 17.8.752).

3. Columbus shall not cause or authorize to be discharged into the atmosphere from any street, road, or parking lot any visible fugitive emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes and must take reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308 and ARM 17.8.752).

4. Water shall be available on site at all times and operated, as necessary, to maintain compliance with opacity limitations in Section II.A.2 and II.A.3 (ARM 17.8.749).

5. Columbus 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.3 (ARM 17.8.752).

6. Total concrete plant production is limited to 219,000 cubic yards of concrete during any rolling 12-month time period (ARM 17.8.749).

7. If the permitted equipment is used in conjunction with any other equipment owned or operated by Columbus, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons of emissions during any rolling 12-month time period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

B. Emissions Monitoring

1. Columbus shall inspect the fabric filter dust collector and its vents, which are used for controlling emissions from the silo and weigh hopper, every 6 months of operation to ensure that each collector is operating at the optimum efficiency. Records of inspections, repairs, and maintenance shall be kept for a minimum of 5 years (ARM 17.8.749).

2. Columbus shall maintain on-site records of inspections, repairs, and maintenance. All records compiled in accordance with this permit shall be maintained by Columbus as a permanent business record for at least 5 years following the date of the measurement, shall be submitted to the Department upon request, and shall be available at the plant site for inspection by the Department (ARM 17.8.749).

C. Testing Requirements

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).

D. Operational Reporting Requirements

1. If this truck-mix concrete batch plant is moved to another location, an Intent to Transfer Form must be sent to the Department. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer Form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).

2. Columbus 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).

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

4. All records compiled in accordance with this permit must be maintained by Columbus 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. These records may be stored at a location other than the plant site upon approval by the Department (ARM 17.8.749).

5. Columbus shall document, by month, the amount of concrete production from the facility. By the 25th day of each month, Columbus shall calculate the total amount of concrete produced during the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.6. 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 – Columbus 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 (Continuous Emissions Monitoring System (CEMS), Continuous Emissions Rate Monitoring System (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 Columbus fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Columbus 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 MAQP 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 Columbus 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
Columbus Concrete
P.O. Box 147
Columbus, MT 59019
MAQP #3379-02

I. Introduction/Process Description

Columbus Concrete (Columbus) owns and operates portable truck-mix concrete batch plant operation, initially located in Section 20, Township 2 South, Range 20 East, in Stillwater County, Montana.

A. Permitted Equipment

Columbus owns and operates a portable truck-mix concrete batch plant, which includes an electrical powered 1950s truck-mix concrete batch plant (maximum capacity of 25 cubic yards per hour (cy/hr)) and associated equipment. Particulate emissions from the cement silo are controlled by a fabric filter dust collector. A rubber boot load-out spout controls particulate emissions from the cement batcher.

No engine/generator is permitted for use because Columbus utilizes landline power for this concrete batch plant.

B. Source Description

For a typical operational setup, stockpiles of sand and gravel for concrete production are stored on site. A loader transfers the sand and gravel from the stockpiles to a weight hopper and the sand and gravel is then conveyed into the concrete batch plant. The cement silo transfers the cement into the batch plant where water is added. The sand, gravel, cement, and water are then loaded into mixing trucks where the materials are mixed together to form concrete. The concrete is then transferred to various construction operations.

C. Permit History

On April 12, 2005, the Department of Environmental Quality (Department) issued MAQP **#3379-00** to Columbus Concrete, Inc. for the operation of a portable truck-mix concrete batch plant.

On August 6, 2009, the Department received a request from Columbus to change the name on MAQP 3379-00 from Columbus Concrete, Inc. to Counter Inc. dba Columbus Concrete, Inc., and the owner's name from Alvin Stradel to John Counter. The permit action transferred ownership and updated the permit to reflect current rule references, permit language, permit format, and emission factors. MAQP **#3379-01** replaced MAQP #3379-00.

D. Current Permit Action

On July 9, 2018, the Department received a request from Columbus to transfer ownership from John Counter to Joseph Brewer (JCBrewer Inc. dba Columbus Concrete). The current permit action transfers the permit from John Counter to Joseph Brewer and updates the contact information to reflect the change in ownership. **MAQP #3379-02** replaces MAQP #3379-01.

E. Additional Information

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

II. Applicable Rules and Regulations

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

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

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

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

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

Columbus shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

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

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

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM10
11. ARM 17.8.230 Fluoride in Forage

Columbus 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 less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, Columbus 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 matter in excess of the amount set forth in this rule.

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 1 pound of sulfur per million Btu fired. (5) Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 dry standard cubic feet (dscf) of gaseous fuel, calculated as hydrogen sulfide at standard conditions. Columbus will burn pipeline quality natural gas, 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 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 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, shall comply with the standards and provisions of 40 CFR Part 60.

   This portable truck-mix concrete plant consists of a 1950's Truck Mix Plant and associated equipment. NSPS (40 CFR Part 60, General Provisions and Subpart F, Portland Cement Plants) does not apply because the portable truck-mix plant does not meet the definition of an affected facility.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below: This source does not meet the definition of an affected facility.

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 fee is not required for the current permit action because the permit action is considered and administrative permit change.

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 MAQP (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an MAQP application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate 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 MAQP 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. Columbus has a PTE greater than 25 tons per year of particulate matter (pm); therefore, an MAQP 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. Columbus was not required to submit a permit application for the current permit action because it is considered an administrative amendment. (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. Columbus was not required to submit a public notice for the current permit action because it is considered an administrative amendment.

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. This action was an administrative amendment and therefore a BACT analysis was not required.

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 Columbus of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

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

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

12. ARM 17.8.763 Revocation of Permit. An MAQP 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 MAQP 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 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 (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 HAP, PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM_{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 MAQP #3379-02 for Columbus, the following conclusions were made:

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

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

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

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

   e. This facility is not subject to any current NEHSAP.

   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 Columbus will be a minor source of emissions as defined under Title V.

III. BACT Determination

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

A BACT determination was not required for the current permit action because the permit change is considered an administrative permit change

IV. Emission Inventory

Source	Tons/Year	
	PM	PM_{10}
Aggregate Delivery to Ground Storage	0.71	0.34
Sand Delivery to Ground Storage	0.16	0.08
Aggregate Transfer to Conveyor	0.71	0.34
Sand Transfer to Conveyor	0.16	0.08
Cement Unloading to Elevated Storage Silo	0.03	0.01
Weigh Hopper Loading of Sand/Aggregate	1.12	0.53
Truck Mix Loading of Cement/Sand/Aggregate	12.51	3.52
Haul Roads	5.68	1.57
Total	**21.08**	**6.47**

Note: The Emission Inventory reflects throughput of approximately 50.3 tons per hour concrete, which is equivalent to the permit maximum of 219,000 cubic yards per 12-month rolling period (II.A.6), and the 25 cubic yards per hour maximum capacity of the plant, operated 24 hours per day. Concrete constituent proportions (wet basis) is determined for one cubic yard (~ 4024 lbs) of concrete as consisting of 1,865 lbs coarse aggregate (46.5%), 1,428 lbs sand (35.5%), 491 lbs cement (12%), 73 lbs cement supplement (2%), and 167 lbs water (~ 20 gallons) (4%) (AP-42, Table 11.12-2, footnote a, 6/06).

No engine/generator is permitted for use because Columbus utilizes landline power for this concrete batch plant.

*Emissions Inventory and Calculation Notes:

bhp = brake horsepower
Btu = british thermal unit
CH_2O = formaldehyde
HAP = hazardous air pollutant
hr = hour
lb = pound
MM denotes 10^6, M denotes 10^3
N/A = not applicable
ND = no data available
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
SO_2 = oxides of sulfur
SO_2 = sulfur dioxide
scf = standard cubic feet
VMT = vehicle miles traveled

Aggregate Delivery to Ground Storage

Maximum Process Rate = 23.4 ton/hr (46.5% of total concrete)
Hours of Operation = 8760 hr/yr

PM Emissions:
Emission Factor = 0.0069 lb/ton (uncontrolled, AP-42, Table 11.12-2, 6/06)
Calculation: 0.0069 lb/ton * 23.4 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.71 ton/yr

PM_{10} Emissions:
Emission Factor = 0.0033 lb/ton (uncontrolled, AP-42, Table 11.12-2, 6/06)
Calculation: 0.0033 lb/ton * 23.4 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.34 ton/yr

Sand Delivery to Ground Storage

Maximum Process Rate = 17.8 ton/hr (35.5% of total concrete)
Hours of Operation = 8760 hr/yr

PM Emissions:
Emission Factor = 0.0021 lb/ton (uncontrolled, AP-42, Table 11.12-2, 6/06)
Calculation: 0.0021 lb/ton * 17.8 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.16 ton/yr

PM_{10} Emissions:
Emission Factor = 0.00099 lb/ton (uncontrolled, AP-42, Table 11.12-2, 6/06)
Calculation: 0.00099 lb/ton * 17.8 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.08 ton/yr

Aggregate Transfer to Conveyor

Maximum Process Rate = 23.4 ton/hr (46.5% of total concrete)
Hours of Operation = 8760 hr/yr

PM Emissions:
Emission Factor = 0.0069 lb/ton (uncontrolled, AP-42, Table 11.12-2, 6/06)
Calculation: 0.0069 lb/ton * 23.4 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.71 ton/yr

PM_{10} Emissions:
Emission Factor = 0.0033 lb/ton (uncontrolled, AP-42, Table 11.12-2, 6/06) Calculation:
0.0033 lb/ton * 23.4 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.34 ton/yr

Sand Transfer to Conveyor

Maximum Process Rate = 17.8 ton/hr (35.5% of total concrete)
Hours of Operation = 8760 hr/yr

PM Emissions:
Emission Factor = 0.0021 lb/ton (uncontrolled, AP-42, Table 11.12-2, 6/06)
Calculation: 0.0021 lb/ton * 17.8 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.16 ton/yr

PM_{10} Emissions:
Emission Factor = 0.00099 lb/ton (uncontrolled, AP-42, Table 11.12-2, 6/06)
Calculation: 0.00099 lb/ton * 17.8 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.08 ton/yr

Cement Unloading to Elevated Storage Silo

Maximum Process Rate = 6.04 ton/hr (12% of total concrete)
Hours of Operation = 8760 hr/yr

PM Emissions:
Emission Factor = 0.00099 lb/ton (controlled, AP-42, Table 11.12-2, 6/06)
Calculation: 0.00099 lb/ton * 6.04 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.03 ton/yr

PM_{10} Emissions:
Emission Factor = 0.00034 lb/ton (uncontrolled, AP-42, Table 11.12-2, 6/06)
Calculation: 0.00034 lb/ton * 6.04 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.01 ton/yr

Weigh Hopper Loading of Sand Aggregate

Maximum Process Rate = 50.3 ton/hr

Hours of Operation = 8760 hr/yr

PM Emissions:

Emission Factor = 0.0051 lb/ton (uncontrolled, AP-42, Table 11.12-2, 6/06)

Calculation: 0.0051 lb/ton * 50.3 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 1.12 ton/yr

PM_{10} Emissions:

Emission Factor = 0.0024 lb/ton (uncontrolled, AP-42, Table 11.12-2, 6/06)

Calculation: 0.0024 lb/ton * 50.3 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.53 ton/yr

Truck Mix Loading of Cement/Supplement/Sand/Aggregate

Maximum Process Rate = 50.3 ton/hr

Hours of Operation = 8760 hr/yr

PM Emissions:

Emission Factor = 0.0568 lb/ton (controlled, AP-42, Table 11.12-2, 6/06)

Calculation: 0.0568 lb/ton * 50.3 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 12.51 ton/yr

PM_{10} Emissions:

Emission Factor = 0.016 lb/ton (controlled, AP-42, Table 11.12-2, 6/06) Calculation: 0.016 lb/ton * 50.3 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 3.52 ton/yr

Haul Roads

Vehicle Miles Traveled (VMT) per day = 5 VMT/day (Estimate)

Maximum Days of Operation = 365 days/yr

PM Emissions:

Emission Factor = $k * (s/12)^{a} * (W/3)^{b}$ = 12.46 lb/VMT (industrial sites, AP-42, Ch. 13.2.2, 11/06)

Where: k = constant = 4.9 lbs/VMT (Value for PM_{30}/TSP, AP-42, Table 13.2.2-3, 11/06) s = surface silt content = 7.1 %

(Mean value, sand/gravel processing, material storage area, AP-42, Table 13.2.2-1, 11/06) W = mean vehicle weight = 54 tons (1994 average loaded/unloaded for a 40-ton truck)

a = constant = 0.7 (Value for PM_{30}/TSP, AP-42, Table 13.2.2-2, 11/06) b = constant = 0.45 (Value for PM_{30}/TSP, AP-42, Table 13.2.2-2, 11/06)

Control Efficiency = 50% (Water spray or chemical dust suppressant)

Calculation: 5 VMT/day * 365 days/yr * 12.46 lb/VMT * 0.0005 ton/lb * (1 - 50/100) = 5.68 ton/yr

PM_{10} Emissions:

Emission Factor = $k * (s/12)^{a} * (W/3)^{b}$ = 3.43 lb/VMT (industrial sites, AP-42, Ch. 13.2.2, 11/06)

Where: k = constant = 1.5 lbs/VMT (Value for PM10, AP-42, Table 13.2.2-2, 11/06)

s = surface silt content = 7.1 %

(Mean value, sand/gravel processing, material storage area, AP-42, Table 13.2.2-1, 11/06) W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)

a = constant = 0.9 (Value for PM_{10}, AP-42, Table 13.2.2-2, 11/06) b = constant = 0.45 (Value for PM_{10}, AP-42, Table 13.2.2-2, 11/06)

Control Efficiency = 50% (Water spray or chemical dust suppressant)

Calculation: 5 VMT/day * 365 days/yr * 3.43 lb/VMT * 0.0005 ton/lb * (1 - 50/100) = 1.57 ton/yr

V. Existing Air Quality

MAQP #3379-02 is issued for the operation of a portable truck-mix concrete batch plant to be initially located in Section 20, Township 2 South, Range 20 East, Stillwater County, Montana. This facility would be allowed to operate at this site and any other areas designated as attainment or unclassified for all National Ambient Air Quality Standards (NAAQS); excluding counties that have a Department-approved permitting program, areas considered tribal lands, or areas in or within 10 km of certain PM nonattainment areas. The permit contains operational conditions and limitations that would protect air quality for this site and the surrounding area.

VI. Ambient Air Impact Analysis

The Department determined that the impact from this permitting action will be minor as this is an administrative amendment. The Department believes it 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	
XX		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	XX	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	XX	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	XX	4. Does the action deprive the owner of all economically viable uses of the property?
	XX	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?
	XX	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	XX	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?
	XX	7a. Is the impact of government action direct, peculiar, and significant?
	XX	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	XX	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?
	XX	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

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

VII. Environmental Assessment

An Environmental Assessment was not required for this permitting action because it is considered an administrative amendment.

MAQP Analysis prepared by: Craig Henrikson
Date: July 18, 2018