Montana Department of Environmental Quality

ADMINISTRATIVE AMENDMENT
TO MONTANA AIR QUALITY PERMIT

Date of Mailing: 9/23/2016

Name of Applicant: Gavilon Grain, LLC

Source: Grain Elevator Operations

Location: Southeast ¼ of Section 16, Township 14 North, Range 16 East, in Fergus County, Montana

Proposed Action: The Department of Environmental Quality (Department) proposes to issue an Administrative Amendment, with conditions, to the above-named permittee. The permit will be assigned #4751-01. The permittee may appeal the Department's decision to the Board of Environmental Review (Board). A request for hearing must be filed by 10/11/2016. This permit shall become final on 10/12/2016, unless the Board orders a stay on the permit.

Proposed Conditions: See attached.

Procedures for Appeal: The permittee may request a hearing before the Board. Any appeal must be filed before the final date stated above. The request for 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 hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, Montana 59620.

For the Department,

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

Shawn Juers
Environmental Engineer
Air Quality Bureau
(406) 444-2049

JM:SJ
Enclosure

MONTANA AIR QUALITY PERMIT

Issued To: Gavilon Grain, LLC
11 ConAgra Drive
Omaha, NE 68102

MAQP: #4751-01
Administrative Amendment Received: 09/06/2016
Department's Decision Issued: 9/23/2016
Permit Final:
AFS #: 027-0011

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Gavilon Grain, LLC (Gavilon), 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

Gavilon's Moore Grain Elevator is located in the Southeast ¼ of Section 16, Township 14 North, Range 16 East, in Fergus County, Montana. The physical address is 117 1st Street Southwest, Moore, Montana, 59464.

B. Current Permit Action

On September 6, 2016, the Montana Department of Environmental Quality – Air Quality Bureau (Department) received from Gavilon a de minimis notification for addition of a small generator engine. The engine has the potential to emit less than 5 tons per year of all conventional pollutants, and therefore the Department concurred that the generator engine met the permitting exemption provided by the Administrative Rules of Montana (ARM) 17.8.745. However, because the MAQP limited the allowable horsepower allowed onsite, Gavilon proposed and the Department concurred that the MAQP be amended pursuant to ARM 17.8.745(2) and ARM 17.8.764.

Information regarding the maximum rated horsepower of the engine (versus the maximum rated fuel throughput) was provided on September 9, 2016. This permitting action updates the permit equipment list, emissions inventory, and corresponding permit conditions to reflect the de minimis addition of a 13 horsepower generator engine.

Section II: Conditions and Limitations

A. Emission Limitations

1. Gavilon shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

2. Gavilon 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).

3. Gavilon shall utilize good work practices, such as utilizing choke flow operations and minimizing, to the extent practical, grain free-fall distances, during all grain handling, receiving and loading operations to minimize particulate emissions and opacity (ARM 17.8.752).

4. Gavilon shall properly operate and maintain enclosed conveyors for grain handling operations at Elevator 3 and Elevator 4 (ARM 17.8.752).

5. Gavilon shall utilize the existing oil suppression system to apply oil to inbound grain at elevator 5 (ARM 17.8.752).

6. Gavilon shall unload grain trucks at Elevator 3 and 5 utilizing receiving pits equipped with gravity actuated mechanical dust control baffles. Gavilon shall install a gravity-activated mechanical dust control baffle system on the existing truck receiving pits of Grain Elevator 3 and Grain Elevator 5 (ARM 17.8.752).

7. Gavilon shall install a gravity-activated mechanical dust control baffle system upon construction of a receiving pit at Grain Elevator 4 (ARM 17.8.752.).

8. Railcar unloading shall occur utilizing a receiving pit equipped with gravity actuated mechanical dust control baffles. Gavilon shall install a gravity-activated mechanical dust control baffle system for the railcar receiving pit (ARM 17.8.752).

9. Gavilon shall properly operate and maintain flexible socks for all truck loadout operations to minimize particulate emissions (ARM 17.8.752).

10. Gavilon shall properly operate and maintain a telescoping spout for all railcar loadout operations to minimize particulate emissions (ARM 17.8.752).

11. Gavilon shall receive by way of truck no more than 10,000,000 bushels of grain less the quantity of grain received by rail per rolling 12-month period (ARM 17.8.749).

12. Gavilon shall ship by way of truck or rail no more than 10,000,000 bushels of grain per rolling 12-month period (ARM 17.8.749).

13. Gavilon shall not clean more than 1,752,000 bushels of grain per rolling 12-month period (ARM 17.8.749).

14. Gavilon shall not dry more than 2,000,000 bushels of grain per rolling 12-month period (ARM 17.8.749).

15. Gavilon 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).

16. Gavilon shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.15 (ARM 17.8.749, ARM 17.8.752).

17. Gavilon shall not operate, or have on-site, more than 2 diesel generator engines. The maximum combined brake horsepower rating of the engines driving the electrical generators shall not exceed 213 horsepower (ARM 17.8.749).

18. Gavilon shall comply with all applicable standards and limitations, and the reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable diesel engine (ARM 17.8.340; 40 CFR 60, Subpart IIII; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. Upon written request of the Department of Environmental Quality (Department), Gavilon shall conduct Method 9 opacity test(s) (ARM 17.8.105).

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

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

C. Operational Reporting Requirements

1. Gavilon 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. Gavilon 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 Gavilon 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).

4. Gavilon shall document, by month, the total bushels of grain received. By the 25th day of each month, Gavilon shall total the bushels of grain received for the previous month, and calculate and record the rolling 12 month sum. The monthly information will be used to verify compliance with the rolling 12-month grain receiving limitation. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

5. Gavilon shall document, by month, the total bushels of grain shipped. By the 25th day of each month, Gavilon shall total the bushels of grain shipped for the previous month, and calculate and record the rolling 12 month sum. The monthly information will be used to verify compliance with the rolling 12-month shipping limitation. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

6. Gavilon shall document, by month, the total bushels of grain dried. By the 25th day of each month, Gavilon shall total the bushels of grain dried for the previous month, and calculate and record the rolling 12 month sum. The monthly information will be used to verify compliance with the rolling 12-month drying limitation. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

7. Gavilon shall document, by month, the total bushels of grain cleaned. By the 25th day of each month, Gavilon shall total the bushels of grain cleaned for the previous month, and calculate and record the rolling 12 month sum. The monthly information will be used to verify compliance with the rolling 12-month cleaning limitation. 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 – Gavilon 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 Gavilon fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Gavilon 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 Gavilon 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 Analysis
Gavilon Grain, LLC
MAQP #4751-01

I. Introduction/Process Description

Gavilon Grain, LLC (Gavilon) owns and operates a grain elevator in Moore, Montana. The facility's legal address is the southeast ¼ of Section 16, Township 14 North, Range 16 East, in Fergus County, Montana. The physical address is 117 1st Street Southwest, Moore, Montana, 59464.

A. Permitted Equipment

Gavilon owns and operates a grain elevator which is projected to handle no more than 10 million bushels per year. The grain elevator operations include, but are not limited to, the following emissions sources:

- Grain Elevator Truck Unloading (Straight or Hopper Bottom Trucks)
  - Elevator 3: 25,000 bushels per hour (bu/hr)
  - Elevator 4: 10,000 bu/hr
  - Elevator 5: 20,000 bu/hr
- Grain Elevator Railcar Unloading
  - 10,000 bu/hr
- Grain Handling via covered conveyors
- Grain Storage
  - Storage Bin Vents – Elevator 3, Elevator 4, Elevator 5
  - Tarp Covered Bin -
  - Covered Ground Pile – 2 million bushels capacity at 15,000 bu/hr unloading rate
- Grain Loading – shipping and internal transfers
  - Elevator 3: 25,000 bu/hr
  - Elevator 4: 10,000 bu/hr
  - Elevator 5: 50,000 bu/hr
- Portable Grain Cleaning – 200 bu/hr
- Grain Dryer – 9 million British thermal units per hour (MMBtu/hr) heat input and 500 bu/hr grain drying throughput
- Unpaved Haul Roads
- 2 de minimis friendly Generator Engines – limited to a maximum combined rating of 213 horsepower (currently one 200 horsepower and one 13 horsepower engine)

B. Source Description

Gavilon owns and operates a grain elevator as described above within the city limits of Moore, Montana.

C. Permit History

On May 8, 2012, the Montana Department of Environmental Quality (Department) received from Gavilon an application for an MAQP for grain elevator operations located in Moore, Montana. The facility consisted of existing equipment, proposed modifications to existing equipment, and new equipment, with need for a permit determined based on internal review by Gavilon of Montana facilities. Gavilon proposed, based on planning and projections, to determine Potential to Emit at a level higher than would be determined via the methodology explained in EPA's "Calculating Potential to Emit and Other Guidance for Grain Handling Facilities" guidance. At Gavilon's request, the MAQP provided throughput limits based on Gavilon's projected highest throughput demands.

During the permitting process, an extension of time to respond to incompleteness items noted during application review was requested and granted. The application was considered complete on October 15, 2012. **MAQP #4751-00** was issued final on November 27, 2012.

D. Current Permit Action

On September 6, 2016, the Department received from Gavilon a de minimis notification for addition of a small generator engine. The engine has the potential to emit less than 5 tons per year of all conventional pollutants, and therefore the Department concurred that the generator engine met the permitting exemption provided by the Administrative Rules of Montana (ARM) 17.8.745. However, because the MAQP limited the allowable horsepower allowed onsite, Gavilon proposed and the Department concurred that the MAQP be amended pursuant to ARM 17.8.745(2) and ARM 17.8.764.

Information regarding the maximum rated horsepower of the engine (versus the maximum rated fuel throughput) was provided on September 9, 2016. This permitting action updates the permit equipment list, emissions inventory, and corresponding permit conditions to reflect the de minimis addition of a 13 horsepower generator engine. **MAQP #4751-01** replaces MAQP #4751-00.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (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).

   Gavilon 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 17.8.223 Ambient Air Quality Standard for PM_{10}

Gavilon 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, Gavilon 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. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.

6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank 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). Gavilon is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.

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

   b. 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines: The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of 40 CFR 60.4200(a)(1) through (4).

      Based on the information presented in the MAQP #4751-00 application, and discussion during the de minimis addition of a second 13 hp engine, the generator engines used would likely be portable in nature, and brought onsite only as needed; therefore, the engine would likely not meet the definition of a stationary engine. However, if the engine were left on-site and became stationary, 40 CFR 60 Subpart IIII may apply.

8. ARM 17.8.341 Emission Standards for Hazardous Air Pollutants. This source shall comply with the standards and provisions of 40 CFR Part 61, as appropriate.

9. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories:

   a. 40 CFR 63, Subpart A – General Provisions may apply to any equipment or facilities subject to a 40 CFR 63 Subpart

   b. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE): An owner or operator of a stationary RICE is subject to this subpart except if the stationary RICE is being tested as a stationary RICE test cell/stand.

      Based on the information presented in the MAQP #4751-00 application, and discussion during the de minimis addition of a second 13 hp engine, the generator engines used would likely be portable in nature, and brought onsite only as needed; therefore, the engine would likely not meet the definition of a stationary engine. However, if the engine were left on-site and became stationary, 40 CFR 63 Subpart ZZZZ may apply.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. As an administrative amendment, the current permit action does not require a fee.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

   An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that 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 air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. Gavilon has a PTE greater than 25 tons per year of particulate matter, particulate matter with an aerodynamic diameter of 10 microns or less, and oxides of nitrogen; therefore, an air quality permit is required.

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

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

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. The current permit action is an administrative amendment; therefore, a permit application is not required. (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. The current permit action is an administrative amendment pursuant to ARM 17.8.745(2) and ARM 17.8.764, therefore, no public notice was required.

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

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

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or 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 air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

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

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

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

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

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through 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 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 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 #4751-01 for Gavilon, 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 (pending the stationary status of the generator engines).

   e. This facility is not subject to any current NESHAP (pending the stationary status of the generator engines).

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

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

Based on these facts, the Department determined that Gavilon will be 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, Gavilon may be required to obtain a Title V Operating Permit pending the stationary status of the generator engines.

III. BACT Determination

A BACT determination is required for each new or modified source. Gavilon 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.

As the current permit action is an administrative amendment pursuant to ARM 17.8.745(2) and ARM 17.8.764, no BACT analysis was required

IV. Emission Inventory

Gavilon Grain, LLC Moore Grain Elevator MAQP #4751-01 Potential To Emit in Tons Per Year						
Source	**PM**	**PM_{10}**	**$PM_{2.5}$**	**NO_X**	**CO**	**VOC**
Grain Receiving (Truck and/or Railcar)	34.29	11.24	1.91			
Grain Loadout (Truck and/or Railcar)	7.87	2.65	0.90			
Grain Cleaning	4.50	1.14	0.19			
Grain Drying	5.78	1.45	0.25			
Grain Drying - Propane Combustion	0.30	0.30	0.30	5.60	3.23	0.43
Internal Handling	11.62	6.48	2.21			
On-site and Offsite Piles	6.13	2.14	0.44			
Storage Bin Vents	9.53	2.40	0.42			
Diesel Generator Engines	2.05	2.05	2.05	28.94	6.24	2.35
Haul Roads	13.89	4.25	0.48			
TOTAL:	**95.93**	**34.10**	**9.15**	**34.54**	**9.47**	**2.78**

bu = bushels
CO = carbon monoxide
hp = horsepower
hr = hour
lb = pound
MMBtu = million British thermal units
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
TPY = ton per year
yr = year
VMT = vehicle miles traveled
VOC = volatile organic compounds

Grain Receiving (SCC 3-02-005-05)

Grain can be received via truck or railcar. It is assumed 100% of grain received will be via straight grain truck at Elevator 4 as doing so provides the most conservative emissions estimate. This calculation overestimates emissions.

Maximum projected grain available:	10,000,000	bushels/yr	(MAQP #4751-00 Application)
Assumed Grain Density:	60	lb/bushel	(highest density grain - AP-42 Appendix B)
Assumed mass grain handled:	381,000	ton/yr	(see MAQP #4751-00 application - Table B-2)

PM Emissions (all filterable)

Emissions Factor: 0.18 lb/ton handled (Max emissions rate, AP-42 Table 9.9.1-1, 3/2003)

Calculations: 0.18lb/ton handled*381000ton/yr*0.0005 ton/lb **34.29 TPY**

PM_{10} Emissions

Emissions Factor: 0.059 lb/ton handled (Max emissions rate, AP-42 Table 9.9.1-1, 3/2003)

Calculations: 0.059lb/ton handled*381000ton/yr*0.0005 ton/lb **11.24 TPY**

$PM_{2.5}$ Emissions

Emissions Factor: 0.01 lb/ton handled (Max emissions rate, AP-42 Table 9.9.1-1, 3/2003)

Calculations: 0.01lb/ton handled*381000ton/yr*0.0005 ton/lb = **1.91 TPY**

Grain Shipping (SCC 3-02-005-06)

Grain shipping can occur via truck or railcar. It is assumed 100% of the grain shipped will be via truck as doing so provides the most conservative emissions estimate

Maximum projected grain available:	10,000,000	bushels/yr	(MAQP #4751-00 Application)
Assumed Grain Density:	60	lb/bushel	(highest density grain - AP-42 Appendix B)
Assumed mass grain handled:	366,000	ton/yr	(see MAQP #4751-00 application - Table B-2)

PM Emissions (all filterable)

Emissions Factor: 0.086 lb/ton handled (Max emissions rate, AP-42 Table 9.9.1-1, 3/2003)

Calculations: 0.086lb/ton handled*366000ton/yr*0.0005 ton/lb *50% control = **7.87 TPY**

PM10 Emissions

Emissions Factor:	0.029	lb/ton handled	(Max emissions rate, AP-42 Table 9.9.1-1, 3/2003)

Calculations: 0.029lb/ton handled*366000ton/yr*0.0005 ton/lb * 50% control = **2.65** **TPY**

PM2.5 Emissions

Emissions Factor:	0.0049	lb/ton handled	(Max emissions rate, AP-42 Table 9.9.1-1, 3/2003)

Calculations: 0.0049lb/ton handled*366000ton/yr*0.0005 ton/lb = **0.90** **TPY**

Grain Cleaning - Internal Vibrating (SCC 3-02-005-37)

Maximum Rated Throughput:	200	bushel/hour	(MAQP #4751-00 Application)
Assumed Grain Density:	60	lb/bushel	(highest density grain - AP-42 Appendix B)
Maximum projected grain available:	2,000,000	bushels/yr	(MAQP #4751-00 Condition)
Allowable Throughput:	60,000	ton/yr	

PM Emissions (All filterable)

Emissions Factor:	0.15	lb/ton	adjusted for uncontrolled assuming 50% (AP-42 Emissions Factor Documentation - Appendix G)

Calculations: 0.15lb/ton*60000ton/yr*0.0005 ton/lb = **4.5** **TPY**

PM10 Emissions

Emissions Factor:	0.038	lb/ton	adjusted for uncontrolled assuming 50% (AP-42 Emissions Factor Documentation - Appendix G)

Calculations: 0.038lb/ton*60000ton/yr*0.0005 ton/lb = **1.14** **TPY**

PM2.5 Emissions

Emissions Factor:	0.0064	lb/ton	adjusted for uncontrolled assuming 50% (AP-42 Emissions Factor Documentation - Appendix G)

Calculations: 0.0064lb/ton*60000ton/yr*0.0005 ton/lb = **0.19** **TPY**

Grain Drying - Column Dryer (SCC 3-02-005-27)

Assumed Grain Density:	60	lb/bushel	(highest density grain - AP-42 Appendix B)
Maximum projected grain available:	1,752,000	bushels/yr	(MAQP #4751-00 Application)
Allowable Throughput:	52,560	ton/yr	(MAQP #4751-00 Permit Condition)

PM Emissions (All Filterable)

Emissions Factor: 0.22 lb/ton (AP-42 Table 9.9.1-1, 3/03)

Calculations: 0.22lb/ton*52,560 ton/yr*0.0005 ton/lb = **5.78** **TPY**

PM_{10} Emissions

Emissions Factor: 0.055 lb/ton (AP-42 Table 9.9.1-1, 3/03)
Calculations: 0.055lb/ton*52,560ton/yr*0.0005 ton/lb = **1.45** **TPY**

$PM_{2.5}$ Emissions

Emissions Factor: 0.0094 lb/ton (AP-42 Table 9.9.1-1, 3/03)
Calculations: 0.0094lb/ton*52,560ton/yr*0.0005 ton/lb = **0.25** **TPY**

Grain Drying - Propane Combustion (SCC 1-02-010-02)

Maximum Firing Rate:	9	MMBtu/hr
Hours of Operation:	8760	hr/yr
Assumed heat content:	91.5	MMBtu/10^3 gallon (AP-42 Table 1.5-1, 07/2008 note a)

PM Emissions - Filterable

Emissions Factor: 0.00219 lb/MMBtu (AP-42 Table 1.5-1, 07/2008)
Calculations: 0.002185792349726 78lb/MMBtu*9MMBtu/hr= 0.02 lb/hr
0.019672131147541lb/hr*8760hr/yr*0.0005ton/lb= **0.09** **ton/yr**

PM Emissions - Condensable

Emissions Factor: 0.00546 lb/MMBtu (AP-42 Table 1.5-1, 07/2008)
Calculations 0.00546448087431694lb/MMBtu*9MMBtu/hr= 0.05 lb/hr
0.0491803278688525lb/hr*8760hr/yr*0.0005ton/lb= **0.22** **ton/yr**

NOx Emissions

Emissions Factor: 0.14208 lb/MMBtu (AP-42 Table 1.5-1, 07/2008)
Calculations 0.14207650273224lb/MMBtu*9MMBtu/hr= 1.28 lb/hr
1.27868852459016lb/hr*8760hr/yr*0.0005ton/lb= **5.60** **ton/yr**

CO Emissions

Emissions Factor:	0.08197 lb/MMBtu (AP-42 Table 1.5-1, 07/2008)		
Calculations	0.0819672131147541lb/MMBtu*9MMBtu/hr=	0.74	lb/hr
	0.737704918032787lb/hr*8760hr/yr*0.0005ton/lb=	**3.23**	**ton/yr**

VOC Emissions

Emissions Factor:	0.010928962 lb/MMBtu (AP-42 Table 1.5-1, 07/2008)		
Calculations	0.0109289617486339lb/MMBtu*9MMBtu/hr=	0.10	lb/hr
	0.0983606557377049lb/hr*8760hr/yr*0.0005ton/lb=	**0.43**	**ton/yr**

Internal Handling (SCC 3-02-005-30)

Grain is transported from the unloading areas (i.e. dump pits) to various storage locations and the loadout areas by a series of conveyors (i.e. belt, drag and/or bucket conveyors).

Assumed Throughput: 762,000 ton/yr (MAQP #4751-00 Application)

PM Emissions (All Filterable)

Emissions Factor:	0.061 lb/ton (AP-42 Table 9.9.1-1, 3/2003)		
Calculations:	0.061lb/ton*762000ton/yr*0.0005 ton/lb =	23.24	ton/yr
	50% control efficiency for practices, covers, and oil suppression	**11.62**	**ton/yr**

PM_{10} Emissions (All Filterable)

Emissions Factor:	0.034 lb/ton (AP-42 Table 9.9.1-1, 3/2003)		
Calculations:	0.034lb/ton*762000ton/yr*0.0005 ton/lb =	12.95	ton/yr
	50% control efficiency for practices, covers, and oil suppression	**6.48**	**ton/yr**

$PM_{2.5}$ Emissions (All Filterable)

Emissions Factor:	0.0058 lb/ton (AP-42 Table 9.9.1-1, 3/2003)		
Calculations:	0.0058lb/ton*762000ton/yr*0.0005 ton/lb =	2.21	ton/yr

Storage Bin Vents (SCC 3-02-005-40)

Assumed Throughput: 762,000 ton/yr (MAQP #4751-00 Application)

PM Emissions (All Filterable)

Emissions Factor:	0.025 lb/ton (AP-42 Table 9.9.1-1, 3/2003)		
Calculations:	0.025lb/ton*762000ton/yr*0.0005 ton/lb =	**9.53**	**ton/yr**

PM10 Emissions (All Filterable)

Emissions Factor: 0.0063 lb/ton (AP-42 Table 9.9.1-1, 3/2003)
Calculations: 0.0063lb/ton*762000ton/yr*0.0005 ton/lb = **2.40 ton/yr**

PM2.5 Emissions (All Filterable)

Emissions Factor: 0.0011 lb/ton (AP-42 Table 9.9.1-1, 3/2003)
Calculations: 0.0011lb/ton*762000ton/yr*0.0005 ton/lb = **0.42 ton/yr**

On-Site Piles - Pile Forming and Wind Erosion

Throughput:

120,000 ton/yr

Pile Forming

PM Emissions (all filterable)

Emissions Factor: 0.000366 lb/ton
Calculations: 0.000366lb/ton*120000ton/yr*0.0005 ton/lb = **0.02 ton/yr**

PM_{10} Emissions

Emissions Factor: 0.000173 lb/ton
Calculations: 0.000173lb/ton*120000ton/yr*0.0005 ton/lb = **0.01 ton/yr**

$PM_{2.5}$ Emissions

Emissions Factor: 0.000026 lb/ton
Calculations: 0.000026lb/ton*120000ton/yr*0.0005 ton/lb = **0.00 ton/yr**

Wind Erosion

Pile Size = 4.82 acres
E = k*1.7*(s/1.5)*[(365-p)/235]*(f/15) (See MAQP #4751-00 Application for details)

k =	1	for PM
	0.5	for PM10
	0.2	for PM2.5
s =	0.4	
p =	110	(AP-42 13.2.1-2, 1/2011)
f =	24.7	Lewistown MET data

PM Emissions

Emissions Factor:	0.81	lb/day/acre			
Calculations:	0.81lb/day/acre*4.82acres=		3.9042	lb/day	
	3.9042lb/day*365 day/yr * 0.0005 ton/lb =			**0.71**	**ton/yr**

PM_{10} Emissions

Emissions Factor:	0.41	lb/day/acre			
Calculations:	0.41lb/day/acre*4.82acres=		1.9762	lb/day	
	1.9762lb/day*365 day/yr * 0.0005 ton/lb =			**0.36**	**ton/yr**

$PM_{2.5}$ Emissions

Emissions Factor:	0.16	lb/day/acre			
Calculations:	0.16lb/day/acre*4.82acres=		0.7712	lb/day	
	0.7712lb/day*365 day/yr * 0.0005 ton/lb =			**0.14**	**ton/yr**

Diesel Generator Engines

Maximum rated Horsepower:	213	hp
Hour of Operation:	8760	hr/yr

$PM/PM_{10}/PM_{2.5}$ Emissions

Emissions Factor:	0.0022	lb/hp-hr	(AP-42 Table 3.3-1, 10/1996)		
Calculations:	0.0022lb/hp-hr*213hp=			0.47	lb/hr
	0.47 lb/hr*8760hr/yr *0.0005 ton/lb =			**2.05**	**ton/yr**

NOx Emissions

Emissions Factor:	0.031	lb/hp-hr	(AP-42 Table 3.3-1, 10/1996)		
Calculations:	0.031lb/hp-hr*213hp=			6.60	lb/hr
	6.60 lb/hr*8760hr/yr *0.0005 ton/lb =			**28.94**	**ton/yr**

CO Emissions

Emissions Factor:	0.00668	lb/hp-hr	(AP-42 Table 3.3-1, 10/1996)		
Calculations:	0.00668lb/hp-hr*213hp=			1.423	lb/hr
	1.336 lb/hr*8760hr/yr *0.0005 ton/lb =			**6.24**	**ton/yr**

VOC Emissions

Emissions Factor:	0.0025141	lb/hp-hr	(AP-42 Table 3.3-1, 10/1996)		
Calculations:	0.0025141lb/hp-hr*213hp=			0.54	lb/hr
	0.54 lb/hr*8760hr/yr *0.0005 ton/lb =			**2.35**	**ton/yr**

Haul Roads:

Assumed VMT/year:	7,490	VMT/yr	(MAQP #4751-00 Application)
Assumed vehicle weight:	38.5	tons	
Assumed empty weight:	14.5	tons	

Where:

E =	size-specific emission factor (lb/VMT)
s =	surface material silt content (%)
W =	mean vehicle weight (tons)

s =	6.40	0.43
W =	26.5	tons

PM Emissions

Emissions Factor Calculations:

k =	4.9	
a =	0.9	
b =	0.45	
E =	7.42	lb/VMT

Emissions Calculations:	7.42lb/VMT*7490VMT/yr*0.0005 ton/lb =	27.78	TPY
	27.7781191139147TPY*50% Control =	**13.89**	**TPY**

PM10 Emissions

Emissions Factor Calculations:

k =	1.5
a =	0.9
b =	0.45
E =	2.27

Emissions Calculations:	2.27*7490VMT/yr*0.0005 ton/lb =	8.50	TPY
	8.50350585119837TPY*50% Control =	**4.25**	**TPY**

PM$_{2.5}$ Emissions

Emissions Factor Calculations:

k =	0.15
a =	0.7
b =	0.45
E =	0.23

Emissions Calculations:	0.23*7490VMT/yr*0.0005 ton/lb =	0.96	TPY
	0.850350585119837TPY*50% Control =	**0.48**	**TPY**

Truck Receiving: Piles							
PM Emissions							
Emissions Factor:	0.18	lb/ton					
Calculations:	0.18lb/ton*120000ton/yr*0.5*0.0005 ton/lb =					**5.40**	**ton/yr**
PM10 Emissions							
Emissions Factor:	0.059	lb/ton					
Calculations:	0.059lb/ton*0.000366lb/ton*0.5*0.0005 ton/lb =					**1.77**	**ton/yr**
PM2.5 Emissions							
Emissions Factor:	0.01	lb/ton					
Calculations:	0.01lb/ton*0.000173lb/ton*0.5*0.0005 ton/lb =					**0.30**	**ton/yr**

V. Existing Air Quality

Gavilon's Moore facility is located in an area currently designated as unclassifiable for all pollutants.

VI. Ambient Air Impact Analysis

The Department determined that the impacts from the permitting of this existing facility will be minor. 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.

VIII. Environmental Assessment

This permitting action updates the permit to reflect a de minimis increase in emissions via administrative amendment. Therefore, no environmental assessment is required.

Analysis Prepared By: Shawn Juers
Date: 9/21/2016