

March 6, 2023

Brian Wanzenried
Viterra USA Grain, LLC.
3815 1st Avenue South
Billings MT 59101

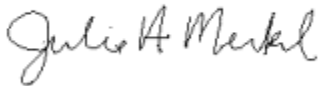
Sent via email: brian.wanzenried@viterra.com

RE: Final Permit Issuance for MAQP #4752-01

Dear Mr. Wanzenried:

Montana Air Quality Permit (MAQP) #4752-01 is deemed final as of March 4, 2023, by DEQ. This permit is for a grain elevator. All conditions of the Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For DEQ,



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



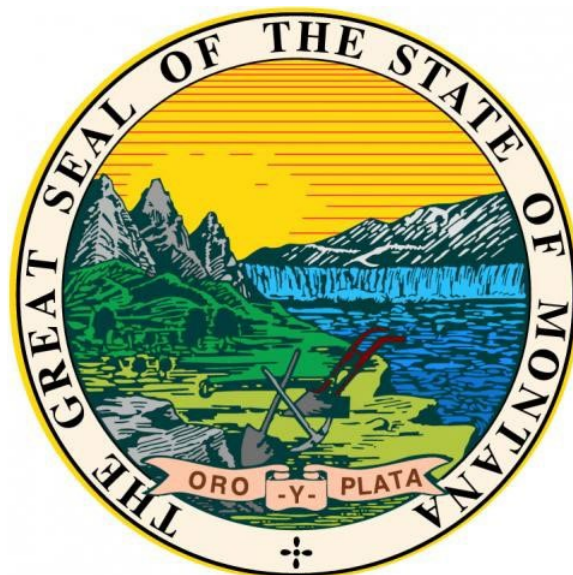
Emily Hultin
Air Quality Engineering Scientist
Air Quality Bureau
(406) 444-2049

Montana Department of Environmental Quality
Air, Energy & Mining Division
Air Quality Bureau

Montana Air Quality Permit #4752-01

Viterra USA Grain, LLC.
Grain Elevator
SE ¼ of Section 4, Township 1 South
Range 28 East, Yellowstone County, Montana
3815 1st Avenue South
Billings, Montana 59101

March 04, 2023



MONTANA AIR QUALITY PERMIT

Issued to: Viterra USA Grain, LLC
3815 1st Avenue South
Billings, Montana 59101

MAQP: #4752-01
Administrative Amendment (AA) Request
Received: 01/31/2023
Department's Decision Issued: 02/16/2023
Permit Final: 03/04/2023
AFS #:111-0043

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

This facility operates in a commercial/industrial area in Billings, Montana and immediately south of the Burlington Northern Santa Fe (BNSF) Railroad tracks. The legal description of the facility is the SE ¼ of Section 4, Township 1 South, Range 28 East, Yellowstone County, Montana.

B. Current Permit Action

On January 31, 2023, DEQ received a request from Gavilon for an Administrative Amendment to MAQP #4752-00 to change the name of the facility from Gavilon Grain, LLC., to Viterra USA Grain, LLC. **MAQP# 4752-01** replaces MAQP #4752-00.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Viterra shall install, operate, and maintain the following emission control equipment in accordance with manufacturer's instructions to provide maximum pollution control (ARM 17.8.752):
 - a. Receiving pit baffles on both the 12,000 bu/hr pit and the 6,000 bu/hr pit (grain receiving);
 - b. Enclosure on internal grain handling equipment including elevator legs and bucket conveyors, bin fill conveyors, reclaim conveyors and distribution system (internal grain handling).

c. Telescoping loadout spout (railcar loading).

2. Viterra shall not receive by truck more than 7,000,000 bushels of grain less the quantity of grain received by rail per rolling 12-month period (ARM 17.8.749).
3. Viterra shall not receive by rail more than 1,000,000 bushels of grain per rolling 12- month period (ARM 17.8.749).
4. Viterra shall receive by way of straight truck into the grain elevator no more than 1,750,000 bushels of grain per rolling 12-month period (ARM 17.8.749).
5. Viterra shall not clean more than 500,000 bushels of grain per rolling 12-month period (ARM 17.8.749).
6. Viterra shall not ship more than 500,000 bushels by truck per rolling 12-month period (ARM 17.8.749).
7. Viterra shall ship by rail not more than 7,000,000 bushels of grain less the quantity of grain shipped by truck per rolling 12-month period (ARM 17.8.749).
8. Viterra 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).
9. Viterra 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).
10. Viterra 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.9 (ARM 17.8.749).

B. Testing Requirements.

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. The Montana Department of Environmental Quality (DEQ) may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Viterra shall supply DEQ with annual production information for all emission points, as required by DEQ 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 DEQ by the date required in the emission inventory request. Information shall be in the units required by DEQ. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. Viterra shall notify DEQ 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 or the addition of a new emission unit. The notice must be submitted to DEQ, in writing, 10 days prior to start-up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).
3. All records compiled in accordance with this permit must be maintained by Viterra 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 DEQ, and must be submitted to DEQ upon request (ARM 17.8.749).
4. Viterra shall document, by month, the total amount of grain received by straight truck and by hopper truck by the grain elevator. By the 25th of each month, Viterra shall total the grain handled for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.2 and II.A.4. The information for the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).
5. Viterra shall document, by month, the total amount of grain received by rail by the grain elevator. By the 25th of each month, Viterra shall total the grain handled for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.3. The information for the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).
6. Viterra shall document, by month, the total amount of grain cleaned. By the 25th of each month, Viterra shall total the grain cleaned for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.5. The information for the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).
7. Viterra shall document, by month, the total amount of grain shipped by way of truck or rail at this facility. By the 25th of each month, Viterra shall total the grain shipped by way of truck or rail for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.6 and II.A.7. The information for the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).

D. Notification

Viterra shall provide DEQ with written notification of the following dates within the specified time periods (ARM 17.8.749):

1. A proposed schedule for installation of the truck receiving baffles submitted to DEQ within 90 days of final permit issuance.
2. Actual start-up date of the truck receiving baffles located on the two truck receiving pits within 15 days after the actual start-up; and
3. All compliance source tests, as required by the Montana Source Test Protocol and Procedures Manual.

SECTION III: General Conditions

- A. Inspection – Viterra shall allow DEQ’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 Emission Monitoring System (CEMS), Continuous Emission 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 Viterra fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Viterra 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 DEQ’s decision may request, within 15 days after DEQ 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 DEQ’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 DEQ’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, DEQ’s decision on the application is final 16 days after DEQ’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 DEQ at the location of the source.

- G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Viterra 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
Viterra USA Grain, LLC
MAQP #4752-01

I. Introduction/Process Description

Viterra USA Grain, LLC (Viterra) proposed to permit an existing truck and railcar grain elevator. The facility is located in Billings, Montana and immediately south of the Burlington Northern Santa Fe (BNSF) railroad tracks. The legal description of the facility is the SE ¼ of Section 4, Township 1 South, Range 28 East, Yellowstone, County, Montana.

A. Permitted Equipment

Viterra proposed to permit an existing a truck and rail grain handling elevator and storage facility. The facility has a grain storage capacity of approximately 1,530,000 bushels (bu) of permanent storage, 24,000 bu/hour (bu/hr) receiving and 70,000 bu/hr loadout capacity. Equipment used at this facility includes, but is not limited to, the following:

- Two grain truck receiving pits – 18,000 bu/hr total;
- One grain railcar receiving pit – 6,000 bu/hr total;
- Grain handling equipment (elevator legs & conveyors)
- Grain silo storage bin(s) – 1,530,000 bu capacity total;
- Grain railcar loading equipment – 50,000 bu/hr;
- Grain truck loading equipment- 20,000 bu/hr;
- Grain Cleaning 15,000 bu/hr;
- Dust control systems – Existing cyclone for grain cleaning operation
- Associated grain handling equipment;

B. Source Description

The truck and rail grain handling facility is designed to receive grain from local farms and country elevators and then store and clean the grain until it is shipped to market. The storage capacity of the facility is 1,530,000 bu. Locally grown grains are hauled to the facility via truck and also by railcar, whereby the unloading takes place in one of the three receiving pits.

Trucks directed to the elevator would discharge grain into one of the two truck receiving pits, equipped with baffles. The single railcar receiving pit is not often used and does not contain baffles with a railcar receiving limitation to minimize potential emissions. All transferring of grain is done using enclosed conveyors from the point of the receiving pits to the storage bins. The main elevator legs and conveyor system is fully enclosed to minimize the release of dust to the atmosphere. The grain is shipped out most often by railcar and occasionally by truck.

C. Permit History

On September 15, 2012, Gavilon Grain, LLC (Gavilon) was issued **MAQP #4752-00** and was granted a permit for an existing a truck and rail grain handling elevator and storage facility. The facility has a grain storage capacity of approximately 1,530,000 bushels (bu) of permanent storage, 24,000 bu/hour (bu/hr) receiving and 70,000 bu/hr loadout capacity.

D. Current Permit Action

On January 31, 2023, DEQ received a request from Gavilon for an Administrative Amendment to MAQP #4752-00 to change the name of the facility from Gavilon Grain, LLC to Viterra USA Grain, LLC. **MAQP# 4752-01** replaces MAQP #4752-00.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Montana Department of Environmental Quality (DEQ). Upon request, DEQ 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 DEQ, 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 DEQ.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by DEQ, 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).

Viterra 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 Testing Protocol and Procedures Manual is available from DEQ upon request.

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

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant 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 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter (PM)
2. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Viterra must maintain compliance with the applicable ambient air quality standards.

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

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into an outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 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, Viterra 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 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR) Part 60, Standards of Performance for New Stationary Sources (NSPS). Subpart DD, Standards of Performance for Grain Elevators, indicates that grain terminal elevators that have a permanent storage capacity of more than 2.5 million U.S. bushels are subject to the requirements of this subpart. Viterra does not have a permanent storage capacity of 2.5 million bushels or more; therefore, NSPS Subpart DD does not apply to this 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 application is incomplete until the proper application fee is paid to DEQ. A permit fee is not required for the current permit action because the permit action is considered an 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 DEQ by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by DEQ; 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. DEQ 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, alter, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. Viterro has PTE greater than 25 tpy of particulate matter (PM) and 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. A permit application was not required for the current permit action because the permit change is considered an administrative permit change. 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. An affidavit of publication of public notice was not required for the current permit action because the permit change is considered an administrative permit change.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by DEQ 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, which is technically practicable and economically feasible, except that Best Available Control Technology (BACT) shall be utilized. No BACT analysis is required for the current permitting action.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by DEQ 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 Viterra 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 DEQ'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 DEQ.

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

This facility is not a major stationary source because it is not a listed source and does not have the PTE more than 250 tons tpy or more of any air pollutant from point sources of 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 tpy of any pollutant;
 - b. PTE > 10 tpy of any one hazardous air pollutant (HAP), PTE > 25 tpy of a combination of all HAPs, or lesser quantity as DEQ may establish by rule; or
 - c. PTE > 70 tpy of PM₁₀ in a serious PM₁₀ non-attainment 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 MAQP #4752-01 for Viterra, the following conclusions were made:
 - a. The facility's PTE is less than 100 tpy for all criteria pollutants.
 - b. The facility's PTE is less than 10 tpy of any one HAP and less than 25 tpy of all HAPs.
 - c. This source is not located in a serious PM₁₀ non-attainment area.
 - d. This facility is not subject to any current NSPS.
 - e. This facility is not subject to any current NESHAP standards.

- f. This source is not a Title IV affected source or a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

Based on these facts, DEQ determined that Viterra would 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. Viterra 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 analysis was not required for the current permit action because the current permit action is considered an administrative permit action.

IV. Emissions Inventory

Emission Source	PTE Tons Per Year		
	PM	PM ₁₀	PM _{2.5}
Grain Receiving	18.9	6.2	1.1
Headhouse and General Handling	12.8	7.1	1.2
Storage Bin Vent	5.3	1.3	0.2
Truck Loadout	9.0	3.0	0.5
Cleaner	7.9	2.0	0.3
Unpaved Roadways (Haul Roads)	15.4	4.2	0.5
	TOTAL EMISSIONS >	69.3	23.9

PM, particulate matter

PM₁₀, 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

Grain Receiving Straight Truck Assumed for All Operations SCC-3-02-005-51

Current Annual Totals 210,000 Tons Per Year As Submitted by Viterra USA Grain, LLC with Permit Application

All Calculations assume 7,000,000 bushels per year and 60 lbs per bushel per application

Operating Schedule:

Particulate Emissions: Emission Factor Determination (Uncontrolled)

PM

Emissions

Emission Rate 0.18 lb/ton [AP-42 Table 9.9.1-1 4/03]

Rate

Calculations (0.18 lb/ton) * 210000 tons/year * 0.0005 lb/ton = 18.90 tpy

PM10
Emissions
Emission Rate 0.059 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.059 lb/ton) * 210000 tons/year * 0.0005 lb/ton= 6.20 tpy

PM2.5
Emissions
Emission Rate 0.01 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.01 lb/ton) * 210000 tons/year * 0.0005 lb/ton= 1.05 tpy

Headhouse and General Handling SCC-3-02-005-30 (Uncontrolled)

Current Annual Totals 420,000 Tons Per Year as Submitted by Viterra USA Grain, LLC
(Equal to Twice the annual receiving rate)

PM
Emissions

Emission Rate 0.061 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.061 lb/ton) * 420000 tons/year * 0.0005 lbs/ton= 12.81 tpy

PM10
Emissions

Emission Rate 0.034 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.034 lb/ton) * 420000 tons/year * 0.0005 lbs/ton= 7.14 tpy

PM2.5
Emissions

Emission Rate 0.0058 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.0058 lb/ton) * 420000 tons/year * 0.0005 lbs/ton= 1.22 tpy

Storage Bin Vent SCC-3-02-005-40 (Uncontrolled)

Current Annual Totals 420,000 Tons Per Year as Submitted by Viterra USA Grain, LLC
(Equal to Twice the annual receiving rate)

PM
Emissions

Emission Rate 0.025 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.025 lb/ton) * 420000 tons/year * 0.0005 lbs/ton= 5.25 tpy

PM10
Emissions

Emission Rate 0.0063 lb/ton [AP-42 Table 9.9.1-1 4/03]
 Calculations (0.0063 lb/ton) * 420000 tons/year * 0.0005 lbs/ton= 1.32 tpy

PM2.5 Emissions

Emission Rate 0.0011 lb/ton [AP-42 Table 9.9.1-1 4/03]
 Calculations (0.0011 lb/ton) * 420000 tons/year * 0.0005 lbs/ton= 0.23 tpy

Grain Shipping Truck Loadout SCC-3-02-005-60 (Uncontrolled)

Current Annual Totals 210,000 Tons Per Year as Submitted by Viterra USA Grain, LLC
 Assumes all loaded out using trucks

PM Emissions

Emission Rate 0.086 lb/ton [AP-42 Table 9.9.1-1 4/03]
 Calculations (0.086 lb/ton) * 210000 tons/year * 0.0005 lbs/ton = 9.03 tpy

PM10 Emissions

Emission Rate 0.029 lb/ton [AP-42 Table 9.9.1-1 4/03]
 Calculations (0.029 lb/ton) * 210000 tons/year * 0.0005 lbs/ton = 3.05 tpy

PM2.5 Emissions

Emission Rate 0.0049 lb/ton [AP-42 Table 9.9.1-1 4/03]
 Calculations (0.0049 lb/ton) * 210000 tons/year * 0.0005 lbs/ton = 0.51 tpy

Grain Cleaning SCC-3-02-005-37 Controlled

Current Annual Totals 210,000 Tons Per Year as Submitted by Viterra USA Grain, LLC

PM Emissions

Emission Rate 0.075 lb/ton [AP-42 Table 9.9.1-1 4/03]
 Calculations (0.075 lb/ton) * 210000 tons/year * 0.0005 lbs/ton = 7.88 tpy

PM10 Emissions

Emission Rate 0.019 lb/ton [AP-42 Table 9.9.1-1 4/03]
 Calculations (0.019 lb/ton) * 210000 tons/year * 0.0005 lbs/ton = 2.00 tpy

PM2.5
Emissions

Emission Rate
Calculations

0.0032 lb/ton	[AP-42 Table 9.9.1-1 4/03]		
		$(0.0032 \text{ lb/ton}) * 210000 \text{ tons/year} * 0.0005 \text{ lbs/ton} =$	0.34 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 Loaded (tons) =	27 Application
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, PM _{10 and PM_{2.5}}	= 0.45 [AP-42 Table 13.2.2-2, 11/06]

PM Emissions(uncontrolled): Miles/Day taken from Permit Application
PM30

Emission Factor	EF = $4.9 * (7.1/12)^{0.7} * (27/3)^{0.45} =$	9.12 lbs/VMT
Calculations	$(9.12 \text{ lbs/VMT}) * (18.5 \text{ miles/day}) =$	168.74 lbs/day
	$(168.74 \text{ lbs/day}) * (365 \text{ days/yr}) * (0.0005 \text{ tons/lb}) =$	30.80 TPY
	50% Control Applied	15.40 TPY

PM₁₀ Emissions(uncontrolled):

Emission Factor	EF = $1.5 * (7.1/12)^{0.9} * (27/3)^{0.45} =$	2.51 lbs/VMT
Calculations	$(2.51 \text{ lbs/VMT}) * (18.5 \text{ miles/day}) =$	46.51 lbs/day
	$(46.51 \text{ lbs/day}) * (365 \text{ days/yr}) * (0.0005 \text{ tons/lb}) =$	8.49 TPY
	50% Control Applied	4.24 TPY

PM_{2.5} Emissions(uncontrolled):

Emission Factor	EF = $0.15 * (7.1/12)^{0.9} * (27/3)^{0.45} =$	0.33 lbs/VMT
Calculations	$(0.33 \text{ lbs/VMT}) * (18.5 \text{ miles/day}) =$	6.03 lbs/day
	$(1.63 \text{ lbs/day}) * (365 \text{ days/yr}) * (0.0005 \text{ tons/lb}) =$	1.10 TPY
	50% Control Applied	0.55 TPY

V. Existing Air Quality

Viterra's grain handling facility is located in the SE ¼ of Section 4, Township 1 South, Range 28 East, Yellowstone, County, Montana. The air quality of this area is classified as

unclassifiable/attainment for National Ambient Air Quality Standards (NAAQS) criteria pollutants, including particulate matter (PM₁₀/PM_{2.5}).

VI. Air Quality Impacts

DEQ determined that there will be no impacts from this permitting action because this permitting action is considered an administrative action. Therefore, DEQ believes this action will not cause or contribute to a violation of any ambient air quality standard.

VII. Ambient Air Impact Analysis

The area surrounding the proposed facility is predominantly agricultural and rural in nature. The emissions from the proposed facility would be intermittent and seasonal in nature with generally good dispersion characteristics in the area. Therefore, in the view of DEQ, the amount of controlled emissions from this facility will not cause an exceedance of any ambient air quality standard.

VIII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, DEQ 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)

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

IX. Environmental Assessment

This permitting action will not result in an increase of emissions from the facility as it is an administrative amendment and therefore an environmental assessment was not required.

Analysis Prepared By: Emily Hultin
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