

March 6, 2023

Brian Wanzenried
Viterra USA Grain, LLC.
Moore Grain Elevator
PO Box 1969
Great Falls MT 59403

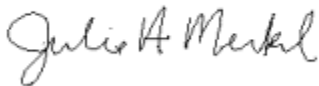
Sent via email: brian.wanzenried@viterra.com

RE: Final Permit Issuance for MAQP #4751-04

Dear Mr. Wanzenried:

Montana Air Quality Permit (MAQP) #4751-04 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 #4751-04

Viterra USA Grain, LLC.
Moore Grain Elevator
Southeast ¼ of Section 16, Township 14 North Range 16 East, in Fergus
County, Montana
PO Box 1969
Great Falls, MT 59403

March 04, 2023



MONTANA AIR QUALITY PERMIT

Issued To: Viterra USA Grain, LLC
Moore Grain Elevator
PO Box 1969
Great Falls, MT 59403

MAQP: #4751-04
Administrative Amendment
Received: 01/31/2023
Department's Decision Issued: 02/16/2023
Permit Final: 3/4/2023

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

Viterra'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 January 31, 2023, the Montana Department of Environmental Quality (DEQ) received an Administrative Amendment request for MAQP #4751-03 to change the name of the owner from Columbia Grain International to Viterra USA Grain, LLC. Columbia Grain International was previously Gavilon Grain, LLC and was not intended to be changed to Columbia Grain International.

Section II: Conditions and Limitations

A. Emission Limitations

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

5. Viterra shall utilize the existing oil suppression system to apply oil to inbound grain at elevator 5 (ARM 17.8.752).
6. Viterra shall unload grain trucks at Elevator 3 and 5 utilizing receiving pits equipped with gravity actuated mechanical dust control baffles. Viterra 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. Viterra 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. Viterra shall install a gravity-activated mechanical dust control baffle system for the railcar receiving pit (ARM 17.8.752).
9. Viterra shall properly operate and maintain flexible socks for all truck loadout operations to minimize particulate emissions (ARM 17.8.752).
10. Viterra shall properly operate and maintain a telescoping spout for all railcar loadout operations to minimize particulate emissions (ARM 17.8.752).
11. Viterra 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. Viterra 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. Viterra shall not clean more than 1,752,000 bushels of grain per rolling 12-month period (ARM 17.8.749).
14. Viterra shall not dry more than 2,000,000 bushels of grain per rolling 12-month period (ARM 17.8.749).
15. 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).
16. 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.15 (ARM 17.8.749, ARM 17.8.752).
17. Viterra 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 216 horsepower (ARM 17.8.749).

18. Viterra 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 (DEQ), Viterra 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. 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 to calculate 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. The notice must be submitted to DEQ, 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 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 bushels of grain received. By the 25th day of each month, Viterra 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. Viterra shall document, by month, the total bushels of grain shipped. By the 25th day of each month, Viterra 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. Viterra shall document, by month, the total bushels of grain dried. By the 25th day of each month, Viterra 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. Viterra shall document, by month, the total bushels of grain cleaned. By the 25th day of each month, Viterra 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 – 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 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 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 Analysis
Viterra USA Grain, LLC – Moore Grain Elevator
MAQP #4751-04

I. Introduction/Process Description

Viterra USA Grain, LLC (Viterra) owns and operates a grain elevator in Moore, Montana referred to as the Moore Grain Elevator. 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

Viterra owns and operates the Moore 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 216 horsepower (currently one 200 horsepower and one 16 horsepower engine)

B. Source Description

Viterra 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 (DEQ) received from Gavilon Grain, LLC (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 Grain 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.

On September 6, 2016, DEQ 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 DEQ 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 DEQ 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 updated 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** replaced MAQP #4751-00.

On February 2, 2017, DEQ 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 DEQ concurred that the generator engine met the permitting exemption provided by ARM 17.8.745. However, because the MAQP limited the allowable horsepower allowed onsite, Gavilon proposed, and DEQ concurred that the MAQP be amended pursuant to ARM 17.8.745(2) and ARM 17.8.764. This permitting action updated the permit equipment list, emissions inventory, and corresponding permit conditions to reflect the de minimis addition of a 16 horsepower (hp) generator engine, which is replacing a previously added 13 hp engine. Further detail can be found in the de minimis notification from Gavilon dated February 2, 2017. **MAQP #4751-02** replaced MAQP #4751-01.

On February 22, 2022, DEQ received an Administrative Amendment application for MAQP #4751-02 to change the name of the owner from Gavilon Grain, LLC to Columbia Grain International. MAQP #4751-02 is replaced by **MAQP #4751-03**.

D. Current Permit Action

On January 31, 2023, DEQ received an Administrative Amendment application for MAQP #4751-03 to change the name of the owner from Columbia Grain International to Viterra USA Grain, LLC. Columbia Grain International was previously Gavilon Grain, LLC and was not intended to be changed to Columbia Grain International. **MAQP #4751-04** replaces MAQP #4751-03.

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 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 Test 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 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 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 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, 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 17.8.322 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). Viterria 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 additions of MAQP #4751-01, 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 additions of MAQP #4751-01, 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 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. 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, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. Viterra 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. 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 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 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 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 DEQ may establish by rule; or
 - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) in a serious PM₁₀ 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 #4751-04 for the Moore Grain Elevator, 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 PM₁₀ 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, DEQ determined that the Moore Grain Elevator 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, Viterra 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. 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. Emission Inventory

Viterra USA Grain, LLC Moore Grain Elevator MAQP #4751-04 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	2.08	2.08	2.08	29.33	6.32	2.38
Haul Roads	13.89	4.25	0.48			
TOTAL:	95.99	34.13	9.18	34.93	9.55	2.81

bu = bushels

CO = carbon monoxide

hp = horsepower

hr = hour

lb = pound

MMBtu = million British thermal units

NO_x = oxides of nitrogen

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

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

PM₁₀ Emissions

Emissions Factor: 0.059 lb/ton handled
 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
 Calculations: $0.01\text{lb/ton handled} * 381000\text{ton/yr} * 0.0005\text{ ton/lb} =$ **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
 Calculations: $0.086\text{lb/ton handled} * 366000\text{ton/yr} * 0.0005\text{ ton/lb} * 50\% \text{ control} =$ **7.87 TPY**

PM₁₀ Emissions

Emissions Factor: 0.029 lb/ton handled
 Calculations: $0.029\text{lb/ton handled} * 366000\text{ton/yr} * 0.0005\text{ ton/lb} * 50\% \text{ control} =$ **2.65 TPY**

PM_{2.5} Emissions

Emissions Factor: 0.0049 lb/ton handled
 Calculations: $0.0049\text{lb/ton handled} * 366000\text{ton/yr} * 0.0005\text{ ton/lb} =$ **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: $0.15\text{lb/ton} * 60000\text{ton/yr} * 0.0005\text{ ton/lb} =$ **4.5 TPY**

PM₁₀ Emissions

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

Calculations: $0.038\text{lb/ton} \times 60000\text{ton/yr} \times 0.0005\text{ ton/lb} =$ **1.14 TPY**

PM_{2.5} Emissions

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

Calculations: $0.0064\text{lb/ton} \times 60000\text{ton/yr} \times 0.0005\text{ ton/lb} =$ **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: $0.22\text{lb/ton} \times 52,560\text{ ton/yr} \times 0.0005\text{ ton/lb} =$ **5.78 TPY**

PM₁₀ Emissions

Emissions Factor: 0.055 lb/ton (AP-42 Table 9.9.1-1, 3/03)

Calculations: $0.055\text{lb/ton} \times 52,560\text{ton/yr} \times 0.0005\text{ ton/lb} =$ **1.45 TPY**

PM_{2.5} Emissions

Emissions Factor: 0.0094 lb/ton (AP-42 Table 9.9.1-1, 3/03)

Calculations: $0.0094\text{lb/ton} \times 52,560\text{ton/yr} \times 0.0005\text{ ton/lb} =$ **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/10³ 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: $0.00218579234972678\text{lb/MMBtu} \times 9\text{MMBtu/hr} =$ 0.02 lb/hr
 $0.019672131147541\text{lb/hr} \times 8760\text{hr/yr} \times 0.0005\text{ton/lb} =$ **0.09 TPY**

PM Emissions - Condensable

Emissions Factor: 0.00546 lb/MMBtu (AP-42 Table 1.5-1, 07/2008)

Calculations $0.00546448087431694\text{lb/MMBtu} \times 9\text{MMBtu/hr} =$ 0.05 lb/hr
 $0.0491803278688525\text{lb/hr} \times 8760\text{hr/yr} \times 0.0005\text{ton/lb} =$ **0.22 TPY**

NO_x 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 TPY

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 TPY

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 TPY

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

(i.e. belt, drag and/or bucket conveyors).

Assumed Throughput:	762,000	ton/yr	(MAQP #4751-00 Application)
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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 TPY
	50% control efficiency for practices, covers, and oil suppression			11.62 TPY

PM₁₀ 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 TPY
	50% control efficiency for practices, covers, and oil suppression			6.48 TPY

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 TPY

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

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

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 TPY**

PM_{2.5} 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 TPY**

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 TPY**

PM₁₀ Emissions

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

PM_{2.5} Emissions

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

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
for
0.5 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 TPY**

PM₁₀ 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 TPY**

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 TPY**

Diesel Generator Engines

Maximum Rated Horsepower: 216 hp
 Hour of Operation: 8760 hr/yr

PM/PM₁₀/PM_{2.5} Emissions

Emissions Factor: 0.0022 lb/hp-hr (AP-42 Table 3.3-1, 10/1996)
 Calculations: 0.0022lb/hp-hr*216hp= 0.48 lb/hr
 0.48 lb/hr*8760hr/yr *0.0005 ton/lb = **2.08 TPY**

NO_x Emissions

Emissions Factor: 0.031 lb/hp-hr (AP-42 Table 3.3-1, 10/1996)
 Calculations: 0.031lb/hp-hr*216hp= 6.7 lb/hr
 6.70 lb/hr*8760hr/yr *0.0005 ton/lb = **29.33 TPY**

CO Emissions

Emissions Factor: 0.00668 lb/hp-hr (AP-42 Table 3.3-1, 10/1996)
 Calculations: 0.00668lb/hp-hr*216hp= 1.443 lb/hr
 1.443 lb/hr*8760hr/yr *0.0005 ton/lb = **6.32 TPY**

VOC Emissions

Emissions Factor: 0.0025141 lb/hp-hr (AP-42 Table 3.3-1, 10/1996)

Calculations: 0.0025141lb/hp-hr*216hp= 0.543 lb/hr

0.543 lb/hr*8760hr/yr *0.0005 ton/lb = **2.38 TPY**

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 = 6.4 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 = 8.5 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: $0.23 * 7490 \text{ VMT/yr} * 0.0005 \text{ ton/lb} = 0.96 \text{ TPY}$
 $0.850350585119837 \text{ TPY} * 50\% \text{ Control} = 0.48 \text{ TPY}$

Truck receiving: Piles

PM Emissions

Emissions Factor: 0.18lb/ton

Calculations: $0.18 \text{ lb/ton} * 120000 \text{ ton/yr} * 0.5 * 0.0005 \text{ ton/lb} = 5.4 \text{ TPY}$

PM10 Emissions

Emissions Factor: 0.059lb/ton

Calculations: $0.059 \text{ lb/ton} * 0.000633 \text{ lb/ton} * 0.5 * 0.0005 \text{ ton/lb} = 1.77 \text{ TPY}$

PM2.5 Emissions

Emissions Factor: 0.01lb/ton

Calculations: $0.01 \text{ lb/ton} * 0.000173 \text{ lb/ton} * 0.5 * 0.0005 \text{ ton/lb} = 0.3 \text{ TPY}$

V. Existing Air Quality

Viterra's Moore Grain Elevator is located in an area currently designated as unclassifiable for all pollutants.

VI. Ambient Air Impact Analysis

The current action is an administrative amendment for an ownership change. As such, DEQ believes this action 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, DEQ 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, DEQ determined there are no taking or damaging implications associated with this permit action.

VIII. Environmental Assessment

This permitting action updates the permit to change the name of company via administrative amendment. Therefore, no environmental assessment is required.

Analysis Prepared By: Emily Hultin
Date: 02/14/2023