

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number:

022011-003

Project Number: 2010-11-013

Installation Number: 075-0004

Parent Company: MFA Incorporated

Parent Company Address: 201 Ray Young Drive, Columbia, MO 65201-3599

Installation Name: MFA Agri Service - Albany

Installation Address: 408 South Birch, Albany, MO 64402

Location Information: Gentry County, S24, T63N, R31W

Application for Authority to Construct was made for:

The addition of a bulk seed handling and fungicide treatment process and a 15.0 ton per year PM₁₀ installation-wide limit. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

FEB 11 2011

EFFECTIVE DATE



DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Departments' Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

Page No.	3
Permit No.	
Project No.	2010-11-013

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

MFA Agri Service - Albany
Gentry County, S24, T63N, R31W

1. Emission Limitation
 - A. MFA Agri Service - Albany shall emit less than 15.0 tons of particulate matter less than ten microns in diameter (PM₁₀) in any consecutive 12-month period from the entire installation as defined in Table 1.

Table 1: Installation Defined

Emission Point	Description	Maximum Hourly Design Rate (MHDR) (tons)
¹ Animal Feed Mill Process		
EP-05b	Feed Receiving	30
EP-06b	Internal Handling	30
EP-07	Hammermill	8
EP-08b	Truck Shipping	30
EP-13	Bin Loading	30
EP-12b	Haul Road	30
² Bulk Dry Fertilizer Process		
EP-09	Fertilizer Receiving	60
EP-10	Handling, Conveying	60
EP-14	Mixing	45
EP-11	Truck Shipping	45
EP-15	Mixer/Blender	45
EP-12	Haul Road	45
³ Grain & Seed Cleaning Process		
EP-05c	Straight Truck Grain Receiving	30
EP-06c	Internal Handling	30
EP-03	Seed Cleaner	6
EP-08c	Truck Shipping	30
EP-12c	Haul Road	30
⁴ Bulk Seed Handling and Treatment Process		
EP-16	Bulk Seed Receiving	36
EP-17	Bulk Seed Storage	36
EP-18	Weigh Hopper	30
EP-19	Treatment	30
EP-20	Handling, Conveying	30
EP-21	Shipping	30
EP-12a	Haul Road	30

¹ The MHDR of the Feed Mill Process is restricted to 8 tons per hour and is limited by the hammermill (EP-7).

² The MHDR of the Bulk Dry Fertilizer Process is restricted to 45 tons per hour and is limited by the mixing (EP-14).

³ The MHDR of the Grain & Seed Cleaning Process is restricted to 6 tons per hour and is limited by the seed cleaning (EP-3).

⁴ The MHDR of the Bulk Seed Handling and Treatment Process is restricted to 30 tons per hour and is limited by the weigh hopper

Page No.	4
Permit No.	
Project No.	2010-11-013

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

(EP-18).

- B. Attachment A or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 1.A.
2. **Operational Requirement**
MFA Agri Service - Albany shall keep all fungicides, insecticides, or nitrogen fixation aides in sealed containers whenever the materials are not in use. MFA Agri Service - Albany shall provide and maintain suitable, easily read, permanent markings on containers containing fungicides, insecticides, or nitrogen fixation aides used with this equipment.
 3. **Record Keeping and Reporting Requirements**
 - A. MFA Agri Service - Albany shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include Material Safety Data Sheets (MSDS) for all materials used
 - B. MFA Agri Service - Albany shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW

Project Number: 2010-11-013
Installation ID Number: 075-0004
Permit Number:

MFA Agri Service - Albany
408 South Birch
Albany, MO 64402

Complete: November 16, 2010

Parent Company:
MFA Incorporated
201 Ray Young Drive
Columbia, MO 65201-3599

Gentry County, S24, T63N, R31W

REVIEW SUMMARY

- MFA Agri Service - Albany has applied for authority to construct a bulk seed handling and fungicide treatment process and has requested a 15.0 ton per year PM₁₀ installation-wide limit.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAP emissions of concern from this process include ethylene glycol (CAS # 107-21-1), but are not expected to exceed the Screening Model Action Level (SMAL).
- None of the New Source Performance Standards (NSPS) apply to the installation. NSPS Subpart DD "Standards of Performance for Grain Elevators" does not apply to the installation, because the installation mills grain, but has a permanent storage capacity of 784,000 bushels, which is less than the 1,000,000 bushel applicability level. NSPS Subpart V "Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants" does not apply to the installation because this facility does not manufacture diammonium phosphate. This installation stores and sells diammonium phosphate, urea, potash, and ammonium sulfate.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation. None of the currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- A building enclosure is being used to control the particulate emissions (PM, PM₁₀ and PM_{2.5}) from the weigh hopper (EP-18) and the treater (EP-19) of this permit.
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of PM₁₀ for the installation are conditioned below de minimis levels. Potential emissions of PM are conditioned to minor source levels.

- This installation is located in Gentry County, an attainment area for all criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.
- Ambient air quality modeling was not performed since potential emissions of PM₁₀ are conditioned below de minimis levels. Ambient air quality modeling was not performed for PM since there is not an ambient air quality standard to compare it to.
- Emissions testing are not required for the equipment.
- No Operating Permit is required for this installation since the installation-wide PM₁₀ emissions are being limited to below the de minimis level.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

MFA Agri Service - Albany, herein referred to as MFA, currently operate an 8 ton per hour feed mill process, a 45 ton per hour bulk dry fertilizer process, and a 6 ton per hour grain and seed cleaning process at this installation located in Albany, Missouri. The bulk dry fertilizer process was permitted under Permit # 0179-002. The other processes did not require a permit. MFA Agri Service - Albany wishes to instate an installation-wide 15.0 ton per year limit on PM₁₀ emissions. Because of this installation-wide limit, MFA will not be required to obtain an Operating Permit.

PROJECT DESCRIPTION

The project is a new bulk seed handling and fungicide treatment process that MFA is adding to this installation, which will handle and treat soybean and wheat. This project includes seed receiving, storage, the use of a weigh hopper, a treater, handling, loading, and a 200 foot haul road. The maximum hourly design rate of the bulk seed handling and fungicide treatment process is restricted by the seed treater (EP-19) at 30.0 tons per hour.

Seed can be treated with any fungicide, insecticide, or nitrogen fixation aide, namely Apron Maxx RFC, Maxim 4FS, Cruiser Maxx, Optimize, or Accelron HX-209. Only one treatment will be used per batch of seed. The greatest potential VOC emissions are from Cruiser Maxx. The greatest potential HAP emissions are from Maxim 4FS. Most treatments are liquid, but are not considered a control device for particulate, HAP, or VOC emissions. The weigh hopper (EP-18) and treater (EP-19) are enclosed in a building and therefore a 3.7% control efficiency for these emission points were used to calculate the potential to emit of this project.

Because MFA has requested an installation-wide PM₁₀ limit and some of the emission factors have been updated, all emissions at this installation were recalculated.

EMISSIONS/CONTROLS EVALUATION

The majority of the emission factors used in the analysis of the feed mill, grain and seed cleaning, and bulk seed handling and fungicide treatment processes were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 9.9.1 “Grain Elevators & Processes” (3/2003). The emission factors used to calculate the emission of the bulk dry fertilizer process were obtained from Factor Information Retrieval (FIRE) Data System Version 6.25. Emissions from haul roads and vehicular activity areas were calculated using the predictive equation from AP-42 Section 13.2.2 “Unpaved Roads,” November 2006. A summary of sources for emission factors is found in Table 2.

Table 2: Emission Factor Summary

Emission Point	Description	Source Classification Code (SCC)	Source
¹ Animal Feed Mill Process			
EP-05b	Feed Receiving	30200802	AP-42, Section 9.9.1
EP-06b	Internal Handling	30200530	AP-42, Section 9.9.1
EP-07	Hammermill	30200817	AP-42, Section 9.9.1
EP-08b	Truck Shipping	30200560	AP-42, Section 9.9.1
EP-13	Bin Loading	30200540	AP-42, Section 9.9.1
EP-12b	Haul Road	N/A	AP-42 Section 13.2.2
² Bulk Dry Fertilizer Process			
EP-09	Fertilizer Receiving	30102709	FIRE, Version 6.25
EP-10	Handling, Conveying	30102709	FIRE, Version 6.25
EP-14	Mixing	30102709	FIRE, Version 6.25
EP-11	Truck Shipping	30102709	FIRE, Version 6.25
EP-15	Mixer/Blender	30102709	FIRE, Version 6.25
EP-12	Haul Road	N/A	AP-42 Section 13.2.2
Grain & Seed Cleaning Process			
EP-05c	Straight Truck Grain Receiving	30200551	AP-42, Section 9.9.1
EP-06c	Internal Handling	30200530	AP-42, Section 9.9.1
EP-03	Seed Cleaner	30200537	AP-42, Section 9.9.1
EP-08c	Truck Shipping	30200560	AP-42, Section 9.9.1
EP-12c	Haul Road	N/A	AP-42 Section 13.2.2
³ Bulk Seed Handling and Treatment Process			
EP-16	Bulk Seed Receiving	30200802	AP-42, Section 9.9.1
EP-17	Bulk Seed Storage	30200540	AP-42, Section 9.9.1
EP-18	Weigh Hopper	30200540	AP-42, Section 9.9.1
EP-19	Treatment	30200530	AP-42, Section 9.9.1
EP-20	Handling, Conveying	30200530	AP-42, Section 9.9.1
EP-21	Shipping	30200560	AP-42, Section 9.9.1
EP-12a	Haul Road	N/A	AP-42 Section 13.2.2

¹. PM_{2.5} emission factors do not exist for grain received at an animal feed mill, therefore the PM_{2.5} emission factor was estimated as being 17% of the PM₁₀ emission factor per Reference 40 of Table 9.9.1-1 of AP-42 (“Emission Factors for Barges and Marine Vessels, Final Test Report to the National Grain and Feed Association,” Washington, DC, October 2001).

2. PM_{2.5} emission factors do not exist for fertilizer receiving and handling, therefore the PM_{2.5} emission factor was estimated as being 25% of the PM₁₀ emission factor per DNR work practice.
3. The seed received during the bulk seed handling and fungicide treatment is considered cleaner than grain received at an elevator; therefore, the emission factor for grain received at an animal feed mill (SCC 3-02-008-02) was used in lieu of grain received at a grain elevator via a hopper truck (SCC 3-02-005-52). The seed treatment's VOC and HAP emissions were calculated on a greatest potential to emit per pollutant basis. Maxim 4FS contains the HAP ethylene glycol. Potential emissions were calculated assuming all available VOC and ethylene glycol are emitted. Cruiser Maxx contains three percent VOCs, cited from the manufacturer Syngenta.

The installation requested a de minimis limit for PM₁₀. Therefore, PM₁₀ emissions from all equipment at this installation, including previously installed equipment, are now limited to less than 15.0 tons per year. Existing Potential Emissions represent emissions from the feed mill, bulk dry fertilizer process, and grain and seed cleaning process, assuming continuous operation (8,760 hours per year). The existing actual emissions are taken from the previous year's Emissions Inventory Questionnaire (EIQ). Potential Emissions of the Application represent emissions from the bulk seed handling and fungicide treatment process, assuming continuous operation. Unconditioned potential emissions of the installation represent the potential emissions of all equipment with control devices. The new installation conditioned potential represents a voluntary PM₁₀ emission limit, with other emissions proportionately reduced. Table 3 provides an emissions summary for this project.

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (2009 EIQ)	Potential Emissions of the Application	Unconditioned Potential Emissions of the Installation	New Installation Conditioned Potential
PM	25.0	63.50	N/A	40.98	104.48	29.28
PM ₁₀	15.0	34.00	1.10	19.53	53.53	< 15.0
PM _{2.5}	10.0	6.87	0.12	2.98	9.85	2.76
SO _x	40.0	N/A	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	14.93	14.93	4.18
CO	100.0	N/A	N/A	N/A	N/A	N/A
HAPs	10.0/25.0	N/A	N/A	1.42	1.42	0.40
Ethylene Glycol	10.0	N/A	N/A	1.42	1.42	0.40

N/A = Not Applicable

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ for the installation are conditioned below de minimis levels. Potential emissions of PM are indirectly conditioned to minor source levels.

APPLICABLE REQUIREMENTS

MFA shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information, 10 CSR 10-6.110*
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required on April 1 for paper submittals or May 1 for MOEIS submittals for the previous year's emissions.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin, 10 CSR 10-6.170*
- *Restriction of Emission of Visible Air Contaminants, 10 CSR 10-6.220*
- *Restriction of Emission of Odors, 10 CSR 10-6.165*

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes, 10 CSR 10-6.400*

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Daronn Williams
Environmental Engineer
PERMIT DOCUMENTS

Date

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated November 1, 2010, received November 2, 2010, designating MFA Incorporated as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Kansas City Regional Office Site Survey, dated December 2, 2010.
- The Material Safety Sheets (MSDS) of Apron Maxx RFC, Maxim 4FS, Cruiser Maxx, Optimize, or Accelron HX-209 from their manufacturer.
- Factor Information Retrieval (FIRE) Data System Version 6.25.

Mr. Alan Mahoney
Safety, Environmental & Regulatory Manager
MFA Agri Service - Albany
201 Ray Young Drive
Columbia, MO 65201

RE: New Source Review Permit - Project Number: 2010-11-013

Dear Mr. Mahoney:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions and your new source review permit application is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Daronn Williams, at the Departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:dwl

Enclosures

c: Kansas City Regional Office
PAMS File: 2010-11-013

Permit Number: