

PERMIT BOOK

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: 11 2 0 0 9 - 0 0 2 Project Number: 2009-06-053

Parent Company: MFA Incorporated

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

Installation Name: MFA Grain - Lamar

Installation Address: 1901 Highway KK, Lamar, MO 64759

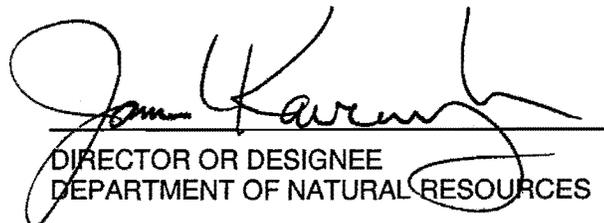
Location Information: Barton County, S30, T32N, R30W

Application for Authority to Construct was made for:
The addition of a small Agri Service operation consisting of seed and feed supply. This review was conducted in accordance with Section (5), 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.

NOV - 2 2009

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 this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. 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 this (these) air contaminant source(s).

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 source(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.

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Project No.	2009-06-053

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 Grain - Lamar
Barton County, S30, T32N, R30W

1. Annual Emission Limitation - PM₁₀
 - A. MFA Grain - Lamar shall emit less than 15.0 tons of particulate matter less than ten (10) microns in diameter (PM₁₀) in any consecutive 12 month period from the entire installation; including the new and existing emission units as specified in Table 1: Emission Unit Summary.
 - B. MFA Grain - Lamar shall maintain an accurate record of PM₁₀ emitted into the atmosphere from the entire installation as specified in Table 1: Emission Unit Summary. Attachment A or an equivalent form shall be used for this purpose. MFA Grain - Lamar shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
 - C. MFA Grain - Lamar shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 1.B. indicate that the source exceeds the limitation of Special Condition Number 1.A.
2. Control Device Requirement – Mineral Oil Dust Suppressant
 - A. MFA Grain - Lamar shall control emissions from the grain elevator (EU04 - EU08) by using mineral oil dust suppressant systems (CD01-CD03) as specified in the permit application.
 - B. The mineral oil dust suppressant systems (CD01-CD03) shall be operated and maintained in accordance with the manufacturer's specifications.
3. MFA Grain - Lamar shall water haul roads whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2009-06-053
Installation ID Number: 011-0038
Permit Number:

MFA Grain - Lamar
1901 Highway KK
Lamar, MO 64759

Complete: June 18, 2009

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

Barton County, S30, T32N, R30W

REVIEW SUMMARY

- MFA Grain - Lamar has applied for the authority to construct a seed and feed supply operation.
- Hazardous Air Pollutant (HAP) emissions are expected from the application of a fungicide containing ethylene glycol (CAS #107-21-1).
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.
- This installation is located in Barton County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.

- Emissions testing is not required for the source.
- No Operating Permit is required for this installation.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

MFA Grain – Lamar is an existing large country grain elevator located in Lamar, Missouri in Barton County. No prior construction permits have been issued to MFA Grain - Lamar from the Air Pollution Control Program. The facility was constructed prior to the applicability date for the construction permits rule, 10 CSR 10-6.060 *Construction Permits Required*, and the existing potential emissions have not been previously determined for construction permitting purposes. Therefore, the existing potential emissions of the facility were calculated for this project.

The existing source is considered the grain elevator operations where various types of grain are received from local farmers over a 625 foot gravel haul road (EU01). Grain is received by either straight truck or hopper truck at one of two receiving pits, referred to as the east receiving pit (EU02) and the west receiving pit (EU03). Grain is transferred by a tipping floor (EU04) and an underground conveyor (EU04) from the receiving pits (EU02 & EU03) to two bucket elevators (EU04) equipped with mineral oil dust suppressant (CD01 and CD02). Grain from the east receiving pit (EU02) goes to the west bucket elevator (EU04), and grain from the west receiving pit (EU03) goes to the east bucket elevator (EU04). The bucket elevators (EU04) lift the grain to the top of the grain elevator where the grain is distributed to the various bins (EU05) by elevator legs (EU04) and a gallery belt (EU04); however, grain that is determined to be too wet is first routed to the grain dryer (EU06) for drying prior to storage. The 10 million Btu per hour grain dryer (EU06) is also equipped with a mineral oil dust suppressant system (CD03) to control dust from the dried grain. The existing grain elevator includes 49 concrete storage bins (EU05) with a total storage capacity of 881,000 bushels and 2 large steel storage bins (EU05) with a total storage capacity of 596,000 bushels. The total storage capacity of the grain elevator at the time of permit issuance is 1,477,000 bushels. The facility has the capability to loadout grain by railcar (EU07) or truck (EU08) for shipment offsite.

The throughput of the existing grain elevator is limited by the receiving capacity of the facility. The east receiving pit (EU02) has a maximum capacity of 6 trucks per hour with a maximum load per truck of 850 bushels per truck resulting in a maximum design rate of 5100 bushels per hour. The west receiving pit (EU03) has a maximum capacity of 8 trucks per hour resulting in a maximum design rate of 6800 bushels per hour. 60 pounds per bushel is considered by the applicant to be a conservative conversion ratio. Therefore the maximum design rate for the existing grain elevator (EU01-EU08) is 357 tons grain per hour.

PROJECT DESCRIPTION

MFA Grain – Lamar has installed a seed and feed supply operation known as MFA Agri Service - Lamar (Agri Service) without first obtaining a construction permit. The Agri Service facility has a 200 foot gravel haul road (EU09) which is separate from the haul road (EU01) for the existing grain elevator. The seed supply activity consists of receiving seed by hopper bottom truck with a portable conveyor (EU10). The seed is unloaded directly into one of four 1800 bushel storage bins. The seed storage bins are not vented, so the storage bins are not considered emission units. At the time of loadout, seed may be transferred by a conveyor (EU11) to a weigh hopper (EU11) and to a seed treater (EU11) for treatment with a fungicide (CD04). Seed may be loaded into bulk bags (EU12) or directly into trucks (EU13) for shipment. The bottleneck for the seed supply operation is the conveyor from the weigh hopper which has a rated capacity of 30 tons seed per hour.

The feed supply operation is very simple, consisting of a 12.5 ton hopper bottom bulk feed storage bin. Feed is delivered by truck over the Agri Service haul road (EU09) and transferred to the feed storage bin by an auger (EU14). The feed storage bin is not vented and is not considered an emission unit. Feed is loaded out to trucks by a 4” auger (EU15) rated at 18 tons feed per hour and is considered the bottleneck for the feed supply operation. The following table provides a summary of the emission units considered for this application.

Table 1: Emission Unit Summary

Emission Unit ID	Description	MHDR	MHDR Units	Installation
EU01	Grain Elevator Gravel Haul Road	625	feet	Existing
EU02	East Receiving Pit	153	tons per hour	Existing
EU03	West Receiving Pit	204	tons per hour	Existing
EU04	Internal Handling	357	tons per hour	Existing
EU05	Storage	357	tons per hour	Existing
EU06	Column Dryer	357	tons per hour	Existing
EU07	Railcar Loadout	357	tons per hour	Existing
EU08	Truck Loadout	357	tons per hour	Existing
EU09	Seed/Feed Supply Gravel Haul Road	528	feet	New (Project)
EU10	Seed Receiving	30	tons per hour	New (Project)
EU11	Seed Transfer	30	tons per hour	New (Project)
EU12	Seed Loadout Bulk Bags	30	tons per hour	New (Project)
EU13	Seed Loadout Truck	30	tons per hour	New (Project)
EU14	Feed Receiving	18	tons per hour	New (Project)
EU15	Feed Loadout	18	tons per hour	New (Project)

EMISSIONS/CONTROLS EVALUATION

The potential emissions of the application were determined using the emission factors obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.4 *Natural Gas Combustion* (July 1998), Section 9.9.1 *Grain Elevators & Processes* (May 2003), and Section 13.2.2 *Unpaved Roads* (November 2006).

The pollutant of concern for the existing grain elevator and the new Agri Service operations is PM₁₀. Potential emissions for the grain elevator (EU01-EU08) were determined for the worst case situation in which all grain is received by straight truck, all grain is dried in the column dryer, and all grain is unloaded into trucks for shipping. A control efficiency of 60% was applied to the internal handling (EU04), storage bins (EU05), and loadout (EU07 and EU08) activities for the application of a mineral oil dust suppressant (CD01-CD03).

Potential emissions for the Agri Service (EU09 – EU15) operations were also determined for the worst case situation. The fungicide application in the seed treater can act as a dust suppressant; however, the seed treater and fungicide application may be by-passed. Therefore, the potential emissions of the seed supply activity did not include a control efficiency for the fungicide application. The fungicide materials contain some volatile organic compounds (VOCs) and the hazardous air pollutant (HAP) ethylene glycol (CAS #107-21-1). The potential emissions of VOCs and HAPs from the fungicide were based on a mass balance approach assuming 100% emitted.

The potential emissions of the haul roads (EU01 and EU09) includes a 50% control efficiency as MFA – Lamar will be watering the haul roads when conditions exist such that particulate matter may travel beyond the property boundary.

Potential emissions of the application represent the potential of the new equipment (EU09 – EU15), assuming continuous operation (8760 hours per year.) The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2008 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	245.55	8.65	7.79	<15.0
SO _x	40.0	0.026	N/D	N/A	N/A
NO _x	40.0	4.29	N/D	N/A	N/A
VOC	40.0	0.24	N/D	11.94	N/A
CO	100.0	3.61	N/D	N/A	N/A
HAP ethylene glycol	10.0	N/A	N/D	1.14	N/A
HAPs Combined	25.0	0.004	N/D	1.14	N/A

N/A = Not Applicable; N/D = Not Determined

MFA-Lamar has requested a facility wide limit on the potential emissions of PM₁₀ in order to avoid being subject to 10 CSR 10-6.065 *Operating Permits*. A special condition of this permit is to track the actual emissions of PM₁₀ for the entire installation. As indicated in attachment A, a composite emission factor of 0.155 pounds PM₁₀ per ton grain received was developed for the grain elevator (EU01-EU08), and a composite

emission factor of 0.033 pounds PM₁₀ per ton combined seed and feed received was developed for the Agri Service operations (EU09-EU15). MFA-Lamar currently holds a basic operating permit and may write to the Air Pollution Control Program and request that their operating permit be terminated.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ are below de minimis levels.

APPLICABLE REQUIREMENTS

MFA Grain - Lamar 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 June 1 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 10-3.090

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 (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Kathi Jantz
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated June 17, 2009, received June 18, 2009, 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.
- Southwest Regional Office Site Survey, dated July 8, 2009.

Attachment A - Monthly PM₁₀ Compliance Worksheet

MFA Grain - Lamar
 Barton County, S30, T32N, R30W
 Project Number: 2009-06-053
 Installation ID Number: 011-0038
 Permit Number: _____

This sheet covers the period from _____ to _____.
 (month, year) (month, year)

Month	Grain Received (tons) ^[1]	Grain Elevator (EU01-EU08) Composite Emission Factor (lbs/ton)	Seed and Feed Received (tons) ^[2]	Agri Service (EU09-EU15) Composite Emission Factor (lbs/ton)	Monthly PM ₁₀ Emissions ^[3] (lbs)	Monthly PM ₁₀ Emissions ^[4] (Tons)	12-Month PM ₁₀ Emissions ^[5] (Tons/Year)
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			
		0.155		0.033			

Note 1: Enter the monthly total of grain received at the grain elevator in tons per month
 Note 2: Enter the monthly total of feed and seed received at the Agri Service in tons per month
 Note 3: The Monthly Emissions (lbs) are calculated by multiplying the monthly grain received (tons) by the grain elevator composite emission factor (lbs PM₁₀/tons grain) , multiplying the monthly seed and feed received (tons) by the Agri Service composite emission factor (lbs PM₁₀/tons feed & seed) and adding them together.
 Note 4: The Monthly Emissions (tons) are calculated by dividing the Monthly emissions (lbs) by 2000
 Note 5: The 12-Month Emissions (tons/year) are a rolling total calculated by adding the Month's Emissions (tons) to the Monthly Emissions (tons) of the previous eleven (11) months. A total of less than 15.0 tons in any consecutive 12-month period indicates compliance.

Mr. Alan Mahoney
Safety, Environmental, and Regulatory Manager
MFA Grain - Lamar
1901 Highway KK
Lamar, MO 64759

RE: New Source Review Permit - Project Number: 2009-06-053

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, 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 Kathi Jantz, 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:kfjl

Enclosures

c: Southwest Regional Office
PAMS File: 2009-06-053

Permit Number: