

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: **07 2007 - 011** Project Number: 2007-05-102

Parent Company: MFA Incorporated

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

Installation Name: MFA Bulk Plant - Irwin

Installation Address: 623 NE 5th Lane, Irwin, MO 64759

Location Information: Barton County, S24, T33N, R31W

Application for Authority to Construct was made for:
Addition of a grain storage pile. 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.

JUL 30 2007

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 department's 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 with 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 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 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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Permit No.	
Project No.	2007-05-102

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 Bulk Plant - Irwin
Barton County, S24, T33N, R31W

1. Emission Limitation
 - A. MFA Bulk Plant - Irwin shall emit less than 15 tons of particulate matter less than ten (10) microns in diameter (PM₁₀) in any consecutive 12 month period from the entire installation.
 - B. MFA Bulk Plant - Irwin shall maintain an accurate record of PM₁₀ emitted into the atmosphere from the entire installation. Attachment A or an equivalent form shall be used for this purpose. MFA Bulk Plant - Irwin shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Department of Natural Resources' personnel upon request.
 - C. MFA Bulk Plant - Irwin 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.

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

Project Number: 2007-05-102
Installation ID Number: 011-0017
Permit Number:

MFA Bulk Plant - Irwin
623 NE 5th Lane
Irwin, MO 64754

Complete: 05/18/2007

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

Barton County, S24, T33N, R31W

REVIEW SUMMARY

- MFA Bulk Plant - Irwin has applied for authority to add a grain storage pile.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards apply to the proposed equipment.
- None of the National Emission Standards for Hazardous Air Pollutants or currently promulgated Maximum Achievable Control Technology 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*. Potential emissions of PM₁₀ are conditioned to less than de minimis levels.
- 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].
- Emissions testing is not required for the equipment.
- No Operating Permit is required for this installation.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

The MFA Bulk Plant in Irwin handles bulk dry fertilizer products. These products are received by railcar or truck and stored in individual bins inside the bulk storage building. The products are then moved by bucket loader to the weigh hopper to complete prescription blends to customer request. The product then goes through a mixer and out to waiting trucks or application spreaders.

No construction permits have been issued to MFA Bulk Plant - Irwin from the Air Pollution Control Program.

PROJECT DESCRIPTION

MFA Bulk Plant – Irwin propose to install a grain storage pile that will be 150' X 480' X 4' and have a capacity of 978,048 bushels (27,385 tons). The structure will be placed on a pad of packed chat. The grain will be placed in the structure using portable conveyor and removed by portable auger. When full the structure will be covered by a tarp system that is held in place by a negative pressure fan system. The fill and reclaim rate of the equipment will be 420 tons per hour (15,000 bushels per hour). The structure will be filled during peak harvest time.

Table 1. Project Emission Points and Emission Point Description

Emission Point	Point Description
TS-1	Grain Receiving
TS-2	Storage Pile
TS-3	Truck Loading
EP-4	Haul Road

EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis 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 and Processes* (03/2003) and Section 13.2.2 *Unpaved Roads* (12/2003). Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). The following table provides an emissions summary for this project. The applicant requested to limit emissions of PM₁₀ from the entire installation to de minimis levels (15 tons per consecutive 12-month period).

Table 2. Maximum Hourly Design Rates (MHDR) and Potential-to-Emit (PTE)

Emission Point	Description	MHDR* (tons/hr)	Emission Factor** (lb/ton)	Potential-to-Emit (lb/hr)	Potential-to-Emit PM ₁₀ (tons/yr)
TS-1	Grain Receiving	420.00	0.0590	24.780	108.54
TS-2	Storage Pile	420.00	0.0063	2.646	11.59
TS-3	Truck Loading	420.00	0.0290	12.180	53.35
EP-4	Haul Road	4.03	3.3400	13.460	58.96
TOTAL				53.07	232.43

* MHDR for EP-4 is in Vehicle Miles Traveled (VMT) per Hour

** Emission Factor for EP-4 is in lb/VMT

Table 3. Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	9.54	N/A	232.43	<15.00
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
HAPs	10.0/25.0	N/A	N/A	N/A	N/A

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

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 conditioned to below de minimis levels.

APPLICABLE REQUIREMENTS

MFA Bulk Plant - Irwin 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 April 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

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.

Maurice Chemweno
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 15, 2007, received May 18, 2007, 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 June 14, 2007.

Mr. Alan Mahoney, CSHS
Safety, Environmental & Regulatory Manager
MFA Incorporated
201 Ray Young Drive
Columbia, MO. 65201

RE: New Source Review Permit - Project Number: 2007-05-102

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 contact Maurice Chemweno or me with the department's Air Pollution Control Program at P.O. Box 176, Jefferson City, MO 65102 or telephone (573) 751-4817. Thank you for your time and consideration.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH: mck

Enclosure

c: Southwest Regional Office
PAMS File: 2007-05-102

Permit Number: