

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: 012011-001 Project Number: 2010-09-043

Parent Company: MFA, Incorporated

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

Installation Name: MFA - Norborne

Installation Number: 033-0019

Installation Address: 11791 Highway 10, Norborne, MO 64668-7189

Location Information: Carroll County, S5, T51N, R24W

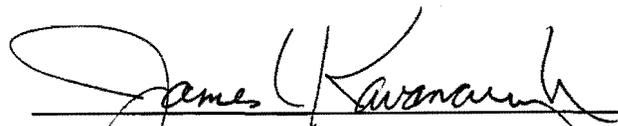
Application for Authority to Construct was made for:
The installation of a new dry bulk fertilizer plant replacing an existing old dry bulk fertilizer facility. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

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

JAN 03 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 this (these) air contaminant source(s). 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 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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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 - Norborne
Carroll County, S5, T51N, R24W

1. Emission Limitation
 - A. MFA - Norborne 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 (see table 1)

Table 1: Emissions Points for Entire Installation

EP-1	Fertilizer Receiving
EP-2	Shipping
EP-3	Manually Added Fertilizer Supplements
EP-4a	Fertilizer Receiving Haul Road
EP-4b	Fertilizer Shipping Haul Road
EP-5	Storage Bays
EP-6	Mixing

- 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. Building Enclosure
MFA - Norborne shall enclose the following emission units with a building enclosure

Table 2: Emission Points to be Enclosed by a Building

EP-2	Shipping
EP-3	Manually Added Fertilizer Supplements
EP-5	Storage Bays
EP-6	Mixing

3. Record Keeping and Reporting Requirements
 - A. MFA - Norborne shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any

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SPECIAL CONDITIONS:

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

Missouri Department of Natural Resources' personnel upon request.
These records shall include Material Safety Data Sheets (MSDS) for all materials used

- B. MFA - Norborne shall report to the Air Pollution Control Program's 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: 2010-09-043
Installation ID Number: 033-0019
Permit Number:

MFA - Norborne
11791 Highway 10
Norborne, MO 64668-7189

Complete: September 20, 2010

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

Carroll County, S5, T51N, R24W

REVIEW SUMMARY

- MFA - Norborne has applied for authority to install a new dry bulk fertilizer plant replacing the old dry bulk fertilizer facility.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- New Source Performance Standards (NSPS) 40 CFR Part 60 - Subpart V - Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants does not apply to this facility because MFA – Norborne does not have any combination of reactors, granulators, dryers, coolers, screens, and mills.
- NSPS 40 CFR Part 60 - Subpart W - Standards of Performance for the Phosphate Fertilizer Industry: Triple Superphosphate Plants does not apply to this facility because MFA – Norborne does not have any combination of: mixers, curing belts (dens), reactors, granulators, dryers, cookers, screens, and mills nor does MFA - Norborne store run-of-pile triple superphosphate.
- 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.
- Building enclosure is being used to control the PM₁₀ emissions from the Shipping (EP-2), Manually Added Fertilizer Supplements (EP-3), Storage Bays (EP-5) and Mixing (EP-6) in 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 PM are above de minimis levels.

- This installation is located in Carroll 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 and the potential emissions of PM_{2.5} are below de minimis levels. Potential emissions of PM are not used to determine modeling applicability.
- 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

MFA – Norborne is located in Norborne, Missouri on 11791 Highway 10. MFA – Norborne currently handles both a dry and liquid bulk fertilizer. All the mixing is done at MFA – Norborne facility. The plant processes a fertilizer mix which includes 4.5% ammonium sulfate, 11.3% ammonium nitrate, 14.5% triple super phosphate, 23.7% potash, 18.8% urea, 17.2% diammonium phosphate, 9.8% pel-lime, and 0.2% TSM premix. This facility will process approximately 2,500 tons of fertilizer annually. Emissions will consist of particulate matter (PM), particulate matter less than 10 microns in aerodynamic diameter (PM₁₀), and particulate matter less than 2.5 microns in aerodynamic diameter (PM_{2.5}). This source is considered a de minimis source since the potential emission are limited below the PM₁₀ de minimis levels. The facility does not require an operating permit but a basic operating permit has been issued to them. The original basic operating permit was issued in 2001 (OP2001-115) and renewed in 2006.

The following permits have been issued to MFA - Norborne from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
0593-012	A new dry bulk fertilizer facility

PROJECT DESCRIPTION

MFA – Norborne has proposed to replace their current dry bulk fertilizer plant with a new dry bulk fertilizer facility. The new facility will consist of a new 250 ton storage building with four storage bays. A weigh hopper and mixer will also be held inside the new building and will mix products before they are sent to the loadout equipment. The maximum hourly design rate (MHDR) of the weigh hopper is 45 tons per hour. This process is considered the bottleneck, therefore, the dry bulk fertilizer as a whole will only be able to produce 45 tons of dry bulk fertilizer per hour. The new facility will receive the fertilizer in the same manner as the old facility. Trucks will deliver the product and it will be poured onto a receiving conveyor and then transferred to a bucket elevator into the storage bays. The storage building itself is the only control device at this facility. The capture efficiency of PM₁₀ and PM_{2.5} was considered 100% with a 3.7% control efficiency given to the building. The building encloses all of the emission points in the new dry bulk fertilizer facility except for the fertilizer receiving. The old dry bulk fertilizer facility will be removed from the site.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 8.3 Ammonium Nitrates, July 1993. 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.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	*Existing Potential Emissions	Existing Actual Emissions (2009 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	N/A	N/A	54.89	30.91
PM ₁₀	15.0	18.00	0.074	26.64	<15.0
PM _{2.5}	10.0	N/A	N/A	4.98	2.80
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

* Existing Potential Emissions were taken from their operating permit OP2001-115.

MFA – Norborne is subject to Missouri State Rule *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400. MFA – Norborne’s uncontrolled emissions are below the emission rate limits found in the rule above, therefore, they are in compliance with the rule.

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 PM are above de minimis levels.

APPLICABLE REQUIREMENTS

MFA - Norborne 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 a hard copy submittal or May 1 for online submittal 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 (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Gerad Fox
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated September 15, 2010, received September 20, 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.
- Northeast Regional Office Site Survey, dated September 29, 2010.

Mr. Alan Mahoney
SER Manager
MFA - Norborne
201 Ray Young Drive
Columbia, MO 65201-3599

RE: New Source Review Permit - Project Number: 2010-09-043

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 Gerad Fox, 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:gfl

Enclosures

c: Northeast Regional Office
PAMS File: 2010-09-043

Permit Number: