

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: 012011-002 Project Number: 2010-10-020

Parent Company: MFA Enterprises, Inc.

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

Installation Name: West Central AGRIService - Rich Hill

Installation Number: 013-0043

Installation Address: 700 East Walnut Street, Rich Hill, MO 64779

Location Information: Bates County, S5, T38N, R31W

Application for Authority to Construct was made for:

A bulk seed handling and treatment process with a maximum hourly throughput of 36.0 tons of seed per hour. 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.

JAN 03 2011

EFFECTIVE DATE

A handwritten signature in black ink, appearing to read "James L. Karamant".
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."

West Central AGRIService - Rich Hill
Bates County, S5, T38N, R31W

1. Emission Limitation
 - A. West Central AGRIService - Rich Hill 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 as defined in Table 1.A.

Table 1.A: Installation Defined

Emission Point	Description	¹ Maximum Hourly Design Rate (MHDR) (tons)	Control Efficiency (%)
Bulk Dry Fertilizer Plant			
EP-01	Fertilizer Receiving, Conveying	60	
EP-02	Fertilizer Storage	60	
EP-03	Weigh Hopper	45	
EP-04	Mixer	45	
EP-05	Shipping	45	
EP-06a	Haul Road	45	
Bulk Seed Handling and Treatment Process			
EP-07	Bulk Seed Receiving	60	
EP-08	Bulk Seed Storage	60	
EP-09	Weigh Hopper	60	3.7
EP-10	Treatment	36	3.7
EP-11	Handling, Conveying	36	3.7
EP-12	Shipping	36	
EP-06b	Haul Road	36	

¹ The MHDR of EP-1 and EP-2 are restricted to 45 tons per hour by EP-3; EP-7, EP-8, and EP-9 are restricted to 36 tons per hour by EP-10.

- 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
West Central AGRIService - Rich Hill shall keep all fungicides, insecticides, or nitrogen fixation aides in sealed containers whenever the materials are not in

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SPECIAL CONDITIONS:

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

use. West Central AGRIService - Rich Hill 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. West Central AGRIService - Rich Hill 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. These records shall include Material Safety Data Sheets (MSDS) for all materials used

- B. West Central AGRIService - Rich Hill 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 (5) REVIEW

Project Number: 2010-10-020
Installation ID Number: 013-0043
Permit Number:

West Central AGRIService - Rich Hill
700 East Walnut Street
Rich Hill, MO 64779

Complete: October 15, 2010

Parent Company:
MFA Enterprises, Inc.
201 Ray Young Drive
Columbia, MO 65201-3599

Bates County, S5, T38N, R31W

REVIEW SUMMARY

- West Central AGRIService - Rich Hill has applied for authority to construct a bulk seed handling and treatment process with a maximum hourly throughput of 36.0 tons per hour of seed.
- 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 18,000 bushels, which is less than the 1,000,000 bushels 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.
- Building enclosure is being used to control the particulate emissions (PM, PM₁₀ and PM_{2.5}) from the seed handling and storage emission points of the project in this permit.
- 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 for the entire installation are conditioned below de minimis levels. Potential emissions

of PM are conditioned to minor source levels.

- This installation is located in Bates 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 is not required for the equipment.
- No Operating Permit is required for this installation since PM₁₀ emissions are being limited to below the de minimis level.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

West Central AGRIService - Rich Hill operates an existing fertilizer processing facility in Rich Hill, Missouri, herein referred to as West Central. The maximum hourly design rate of the fertilizer process is restricted by the weigh hopper and mixer at 45 tons per hour. No permits have been issued to West Central from the Air Pollution Control Program. The fertilizer process was built prior to May 13, 1982 and is therefore "grandfathered" into exemption from construction permitting per 10 CSR 10-6.060(5)(E)3. However, West Central wishes to instate an installation wide 15.0 ton per year limit on PM₁₀ emissions. Emissions from the grandfathered equipment are not included in the project emissions, but will be tracked for compliance with the PM₁₀ limit.

PROJECT DESCRIPTION

West Central is adding a bulk seed handling and fungicide treatment process. Because the potential PM₁₀ emissions of this additional process is above insignificant levels of 10 CSR 10-6.061(3)(A)3.A., a permit is required per 10 CSR 10-6.060(1)(B). West Central plans to handle and treat soybean and wheat. This project includes seed receiving, storage, handling, treatment, loading, and a 528 foot haul road. The maximum hourly design rate of the bulk seed handling and fungicide treatment process is restricted by the seed treater (EP-10) at 36.0 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 liquids, but are not considered a control device for particulate, HAP, or VOC emissions. The seed handling and storage emission points 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.

EMISSIONS/CONTROLS EVALUATION

The emission factors used in the analysis of the bulk seed handling and fungicide treatment process 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 seed received 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). PM_{2.5} emission factors do not exist for grain received at an animal feed mill, therefore the PM_{2.5} emission factor (0.000425 pounds per ton of seed) was estimated as being 17% of the PM₁₀ emission factor (0.02 pounds per ton of fertilizer), 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). Emissions from the storage bins and weigh hopper filling were calculated using the storage bin vent emission factors. Seed treatment particulate emissions were calculated using the internal handling emission factor. 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.

The emission factors used to analysis the fertilizer process (SCC 3-01-027-09) were obtained from Factor Information Retrieval (FIRE) Data System Version 6.25. PM_{2.5} emission factors do not exist for fertilizer receiving and handling, therefore the PM_{2.5} emission factor (0.005 pounds per ton of fertilizer) was estimated as being 25% of the PM₁₀ emission factor (0.02 pounds per ton of fertilizer). 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 equipment installed before May 13, 1982 that did not require a permit when it was constructed, is now limited to less than 15.0 tons per year. Existing Potential Emissions represent emissions from the bulk dry fertilizer process, assuming continuous operation (8,760 hours per year). The existing actual emissions are typically taken from the previous year's Emissions Inventory Questionnaire (EIQ), but since this is the installation's first construction permit, an EIQ has not been submitted. 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. The new installation conditioned potential represents a voluntary PM₁₀ emission limit, with other emissions proportionately reduced. Table 2 provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	¹ Existing Potential Emissions	Existing Actual Emissions	² Potential Emissions of the Application	³ Unconditioned Potential Emissions of the Installation	⁴ New Installation Conditioned Potential
PM	25.0	31.12	N/A	35.18	66.30	17.92
PM ₁₀	15.0	31.12	N/A	24.37	55.49	< 15.0
PM _{2.5}	10.0	6.07	N/A	3.66	9.72	N/A
SOx	40.0	N/A	N/A	N/A	N/A	N/A
NOx	40.0	N/A	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	17.92	17.92	N/A
CO	100.0	N/A	N/A	N/A	N/A	N/A
⁵ HAPs	10.0/25.0	N/A	N/A	1.71	1.71	N/A

N/A = Not Applicable

- ¹ Existing Potential Emissions represent emissions from the existing bulk dry fertilizer process that was installed before May 13, 1982
- ² Potential Emissions of the Application represent emissions from the bulk seed handling and fungicide treatment process.
- ³ Unconditioned potential emissions of the installation represent the potential emissions of all equipment.
- ⁴ The new installation conditioned potential represents a voluntary PM₁₀ emission limit, with other emissions proportionately reduced.
- ⁵ The only HAP of concern is ethylene glycol, which is emitted from the use of Maxim 4FS in the seed treater. This is the only source of HAP emissions for this project.

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 for the installation are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

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

Daronn Williams
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated October 12, 2010, received October 13, 2010, designating MFA Enterprises, Inc. 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 October 20, 2010.
- *Table of Hazardous Air Pollutants, Screening Model Action Levels, and Risk Assessment Levels*, Revision 2, Missouri Department of Natural Resources Air Pollution Control Program, September 29, 2009.
- 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

Attachment A - Installation PM₁₀ Compliance Worksheet

West Central AGRIService - Rich Hill
 Bates County, S5, T38N, R31W
 Project Number: 2010-10-020
 Installation ID Number: 025-0005
 Permit Number: _____

This sheet covers the month of _____ .
 (month, year)

Emission Description	Monthly Throughput (tons)	Composite Emission Factor (pounds of PM ₁₀ per ton)	¹ Emissions
Fertilizer			
Fertilizer Receiving & Storage		0.047	
Fertilizer Handling via Weight Hopper, Mixer & Shipping		0.067	
Seed			
Seed Receiving & Storage		0.026	
Seed Treater & Seed Handling via Conveyors & Shipping		0.108	
² Monthly PM₁₀ Emissions (pounds)			
³ Monthly PM₁₀ Emissions (tons)			
⁴ Cumulative PM₁₀ Emissions (tons)			

- ¹ Emissions calculated by multiplying the Throughput by the respective Emission Factor.
- ² Monthly PM₁₀ Emissions in pounds calculated by summing the eleven Emissions.
- ³ Monthly PM₁₀ Emissions in tons calculated by dividing the Monthly PM₁₀ Emissions in pounds by 2,000.
- ⁴ Cumulative PM₁₀ Emissions calculated by summing this month's PM₁₀ Emissions in tons with the previous eleven month's PM₁₀ Emissions in tons. A total of less than **15.0** tons is necessary for compliance.

Mr. Alan Mahoney
Safety, Environmental & Regulatory Manager
West Central AGRIService - Rich Hill
P.O. Box 8
Rich Hill, MO 64779

RE: New Source Review Permit - Project Number: 2010-10-020

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 Department's 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: 2010-10-020

Permit Number: