

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: 062015-015

Project Number: 2015-04-052  
Installation Number: 019-0024

Parent Company: MFA, Inc.

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

Installation Name: MFA Agri Service – Centralia

Installation Address: 202 North Jefferson Street, Centralia, MO 65240

Location Information: Boone County (S10, T51N, R11W)

Application for Authority to Construct was made for:

The installation of a new receiving pit, two storage bins, an overhead loadout bin, a bucket elevator, and all associated fill/ reclaim equipment. 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.

JUN 30 2015

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 startup 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 startup 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.

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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 Agri Service – Centralia  
Boone County, (S10, T51N, R11W)

1. Superseding Condition
  - A. The conditions of this permit supersede Special Condition 2 found in construction permit 032013-001, previously issued by the Air Pollution Control Program.
  
2. PM<sub>10</sub> Emission Limitation
  - A. MFA Agri Service – Centralia shall emit less than 15.0 tons of PM<sub>10</sub> in any consecutive 12-month period from the entire installation, as listed in the table below.

Table 1. Facility Emission Points

Emission Point	Description	Emission Point	Description
EP-1a,b*	Grain Receiving	EP-10	Fertilizer Handling
EP-2a,b*	Grain Handling	EP-11*	Haul Roads
EP-3a	Grain Dryer	EP-12	Fertilizer Mixer
EP-3b	Grain Dryer Combustion	EP-13*	Grain Storage Bins
EP-4a,c*	Grain Loadout (Truck)	EP-14	Fertilizer Loadout
EP-4b	Grain Loadout (Rail)	EP-S1	Seed Receiving
EP-5	Feed Receiving	EP-S2	Seed Filling
EP-6	Feed Loadout	EP-S3	Seed Conveyor
EP-7	Feed Storage Bins	EP-S4	Seed Weigh Hopper
EP-8	Fertilizer Receiving	EP-S5	Seed Treater/ Blender
EP-9	Fertilizer Storage Bins	EP-S6	Seed Loadout

\*Indicates new or modified emission point

- 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 Condition 2.A.

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**SPECIAL CONDITIONS:**

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

3. Record Keeping and Reporting Requirements
  - A. MFA Agri Service – Centralia 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.
  - B. MFA Agri Service – Centralia shall report to the Air Pollution Control Program’s Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 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: 2015-04-052  
Installation ID Number: 019-0024  
Permit Number:

MFA Agri Service – Centralia  
202 North Jefferson Street  
Centralia, MO 65240  
Boone County (S10, T51N, R11W)

Complete Date  
of Application: May 13, 2015

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

REVIEW SUMMARY

- MFA Agri Service – Centralia has applied for authority to install a new receiving pit, two storage bins, an overhead loadout bin, a bucket elevator, and all associated fill/reclaim equipment.
- HAP emissions are not expected from the proposed equipment.
- None of the NSPS apply to the installation. 40 CFR Part 60 Subpart DD, *Standards of Performance for Grain Elevators*, does not apply to this installation because the maximum grain storage capacity is less than 2.5 million bushels. After constructing the new storage bins referenced in this permit, the facility will have a permanent grain storage capacity of 1,271,150 bushels.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- No air pollution control equipment is being used with the new equipment.
- 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<sub>10</sub> are conditioned below the de minimis level. Potential emissions of PM are above the de minimis level but below the major source level.
- This installation is located in Boone 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.

- Emissions testing is not required for the equipment.
- Ambient air quality modeling was not performed for this review. Although PM emissions exceed the de minimis level, there is no standard for modeling PM.
- No Operating Permit is required for this installation.
- Approval of this permit is recommended with special conditions.

## INSTALLATION DESCRIPTION

MFA Agri-Service – Centralia (herein referred to as MFA) is an existing grain elevator and fertilizer mixing facility located at 202 North Jefferson Street in Centralia, Missouri. The facility is also capable of receiving and storing animal feed, as well as storing and treating seed with fungicide. MFA does not manufacture or process any fertilizer, but receives dry fertilizer that is stored until sale. MFA can receive and loadout fertilizer at a rate of 45.0 tons per hour on a yearly basis, with the conveyance system serving as the bottleneck. MFA is capable of receiving and shipping grain at a rate of 360.0 tons per hour. A 20.0 MMBtu/hr grain dryer can dry 42.0 tons of grain per hour, but not all grain is dried, so the grain dryer is not a facility bottleneck. The seed treating process is capable of handling 36.0 tons of seed per hour. The grain dryer and seed treater are the only existing emission points with the potential to emit VOCs and HAPs. The facility does not require an operating permit at this time.

The following New Source Review permits have been issued to MFA Agri Service – Centralia from the Air Pollution Control Program.

Table 2: Permit History

Permit Number	Description
032013-001	Addition of 5 Bins, Conveyors, Weigh Hopper, and Seed Treater
1197-009	Addition of 104,000 Bushel Corrugate
0294-004	3 Ton Molasses Mixer for Fertilizer
1090-003	Grain Facility
1076-002	Fertilizer Blending Plant

## PROJECT DESCRIPTION

MFA is proposing to install a new grain receiving and handling leg. This will include a new receiving pit, two corrugated steel storage bins, an overhead loadout bin, a bucket elevator, and any associated fill/ reclaim equipment. This new leg will have the overall capability of handling up to 360 tons of grain per hour, including loadout and shipping by truck. It is assumed that the new equipment will function independently from the existing equipment at the facility, for simplicity of calculation.

## EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 9.9.1, *Grain Elevators & Processes* (May 2003). All emission factors were taken as uncontrolled values from Table 9.9.1-1. Haul road emissions were calculated using the predictive equation found in AP-42 Section 13.2.2 *Unpaved Roads* (November 2006). In order to remain conservative, it was assumed that all receiving and shipping operations are carried out by straight trucks.

The following table provides an emissions summary for this project. Existing potential emissions were taken from the previous construction permit 032013-001. Existing actual emissions were taken from the installation's 2014 EIQ. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8,760 hours per year) at the maximum design rate. The new installation conditioned potential represents the subsequent potential emissions of the entire facility after taking into account applicable special condition limitations.

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2014 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	35.93	N/D	612.01	42.13
PM <sub>10</sub>	15.0	<15.0	3.82	218.51	<15.0
PM <sub>2.5</sub>	10.0	2.29	0.68	35.99	2.42
SO <sub>x</sub>	40.0	1.44	N/D	N/A	1.44
NO <sub>x</sub>	40.0	12.45	0.38	N/A	12.45
VOC	40.0	18.07	0.02	N/A	18.07
CO	100.0	7.18	0.32	N/A	7.18
Total HAPs	25.0	0.16	N/D	N/A	0.16

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

## 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<sub>10</sub> are conditioned below the de minimis level. Potential emissions of PM are above the de minimis level but below the major source level.

## APPLICABLE REQUIREMENTS

MFA Agri Service – Centralia 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
- *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.

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Ryan Schott  
New Source Review Unit

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Date

#### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated April 15, 2015, received April 20, 2015, designating MFA, Inc. as the owner and operator of the installation.

# Attachment A – PM<sub>10</sub> Compliance Worksheet

MFA Agri Service - Centralia

Boone County, S10, T51N, R11W  
 Project Number: 2015-04-052  
 Installation ID Number: 019-0024  
 Permit Number: \_\_\_\_\_

This sheet covers the period from \_\_\_\_\_ (month/year) to \_\_\_\_\_ (month/year). (Copy this sheet as needed)

(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)
Month	Material Received (tons)		PM <sub>10</sub> Emission Factor (lb/ton)	Monthly PM <sub>10</sub> Emissions (pounds)	Monthly PM <sub>10</sub> Emissions (tons)	Previous Month's 12-Month PM <sub>10</sub> Emissions (tons)	Monthly PM <sub>10</sub> Emissions from Previous Year (tons)	Current 12-Month PM <sub>10</sub> Emissions (tons)
<i>Example</i>	<i>Seed</i>	<i>5,000</i>	<i>0.189</i>	<i>945</i>	<i>1.245</i>	<i>14.791</i>	<i>1.183</i>	<i>14.853</i>
	<i>Grain</i>	<i>5,000</i>	<i>0.153</i>	<i>745</i>				
	<i>Feed</i>	<i>5,000</i>	<i>0.032</i>	<i>160</i>				
	<i>Fertilizer</i>	<i>5,000</i>	<i>0.124</i>	<i>620</i>				
	Seed		0.189					
	Grain		0.153					
	Feed		0.032					
	Fertilizer		0.124					
	Seed		0.189					
	Grain		0.153					
	Feed		0.032					
	Fertilizer		0.124					
	Seed		0.189					
	Grain		0.153					
	Feed		0.032					
	Fertilizer		0.124					
	Seed		0.189					
	Grain		0.153					
	Feed		0.032					
	Fertilizer		0.124					
	Seed		0.189					
	Grain		0.153					
	Feed		0.032					
	Fertilizer		0.124					
	Seed		0.189					
	Grain		0.153					
	Feed		0.032					
	Fertilizer		0.124					

- a) Record the current date. (Month, Year)
- b) Record this month's feed, seed, grain, and fertilizer received.
- c) PM<sub>10</sub> composite emission factor for each process.
- d) Calculate using the following equation: (d) = (b) x (c).
- e) Calculate using the following equation: (e) = [(d) for seed received + (d) for grain received + (d) for feed received + (d) for fertilizer received] / 2,000
- f) Record the 12-month PM<sub>10</sub> emissions (h) from last month.
- g) Record the monthly PM<sub>10</sub> emissions (e) from this month last year.
- h) Calculate the new 12-month PM<sub>10</sub> emissions. (h) = (e) + (f) – (g)

**A 12-month Rolling Total less than 15.0 tons of PM<sub>10</sub> indicates compliance with Special Condition 2.A.**

## APPENDIX A

### Abbreviations and Acronyms

<b>%</b> .....	percent	<b>m/s</b> .....	meters per second
<b>°F</b> .....	degrees Fahrenheit	<b>Mgal</b> .....	1,000 gallons
<b>acfm</b> .....	actual cubic feet per minute	<b>MW</b> .....	megawatt
<b>BACT</b> .....	Best Available Control Technology	<b>MHDR</b> .....	maximum hourly design rate
<b>BMPs</b> .....	Best Management Practices	<b>MMBtu</b> ....	Million British thermal units
<b>Btu</b> .....	British thermal unit	<b>MMCF</b> .....	million cubic feet
<b>CAM</b> .....	Compliance Assurance Monitoring	<b>MSDS</b> .....	Material Safety Data Sheet
<b>CAS</b> .....	Chemical Abstracts Service	<b>NAAQS</b> ...	National Ambient Air Quality Standards
<b>CEMS</b> .....	Continuous Emission Monitor System	<b>NESHAPs</b>	National Emissions Standards for Hazardous Air Pollutants
<b>CFR</b> .....	Code of Federal Regulations	<b>NO<sub>x</sub></b> .....	nitrogen oxides
<b>CO</b> .....	carbon monoxide	<b>NSPS</b> .....	New Source Performance Standards
<b>CO<sub>2</sub></b> .....	carbon dioxide	<b>NSR</b> .....	New Source Review
<b>CO<sub>2e</sub></b> .....	carbon dioxide equivalent	<b>PM</b> .....	particulate matter
<b>COMS</b> .....	Continuous Opacity Monitoring System	<b>PM<sub>2.5</sub></b> .....	particulate matter less than 2.5 microns in aerodynamic diameter
<b>CSR</b> .....	Code of State Regulations	<b>PM<sub>10</sub></b> .....	particulate matter less than 10 microns in aerodynamic diameter
<b>dscf</b> .....	dry standard cubic feet	<b>ppm</b> .....	parts per million
<b>EQ</b> .....	Emission Inventory Questionnaire	<b>PSD</b> .....	Prevention of Significant Deterioration
<b>EP</b> .....	Emission Point	<b>PTE</b> .....	potential to emit
<b>EPA</b> .....	Environmental Protection Agency	<b>RACT</b> .....	Reasonable Available Control Technology
<b>EU</b> .....	Emission Unit	<b>RAL</b> .....	Risk Assessment Level
<b>fps</b> .....	feet per second	<b>SCC</b> .....	Source Classification Code
<b>ft</b> .....	feet	<b>scfm</b> .....	standard cubic feet per minute
<b>GACT</b> .....	Generally Available Control Technology	<b>SDS</b> .....	Safety Data Sheet
<b>GHG</b> .....	Greenhouse Gas	<b>SIC</b> .....	Standard Industrial Classification
<b>gpm</b> .....	gallons per minute	<b>SIP</b> .....	State Implementation Plan
<b>gr</b> .....	grains	<b>SMAL</b> .....	Screening Model Action Levels
<b>GWP</b> .....	Global Warming Potential	<b>SO<sub>x</sub></b> .....	sulfur oxides
<b>HAP</b> .....	Hazardous Air Pollutant	<b>SO<sub>2</sub></b> .....	sulfur dioxide
<b>hr</b> .....	hour	<b>tph</b> .....	tons per hour
<b>hp</b> .....	horsepower	<b>tpy</b> .....	tons per year
<b>lb</b> .....	pound	<b>VMT</b> .....	vehicle miles traveled
<b>lbs/hr</b> .....	pounds per hour	<b>VOC</b> .....	Volatile Organic Compound
<b>MACT</b> .....	Maximum Achievable Control Technology		
<b>µg/m<sup>3</sup></b> .....	micrograms per cubic meter		

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

RE: New Source Review Permit - Project Number: 2015-04-052

Dear Mr. Mahoney:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions 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 were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty 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 administrative hearing commission, whose contact information is: Administrative Hearing Commission, Truman State Office Building, P.O. Box 1557, Jefferson City, Missouri 65102, [www.oa.mo.gov/ahc](http://www.oa.mo.gov/ahc). If you have any questions regarding this permit, contact Ryan Schott, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 (573) 751-4817.

Sincerely,

**AIR POLLUTION CONTROL PROGRAM**

Susan Heckenkamp  
New Source Review Unit Chief

SH:rs1

Enclosures

c: Northeast Regional Office  
PAMS File: 2015-04-052  
Permit Number: