

STATE OF MISSOURI



SEP 8 2014

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.

082014-020

Permit Number:

Project Number: 2014-05-079

Installation Number: 075-0004

Parent Company: MFA Incorporated

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

Installation Name: MFA Agri Service - Albany

Installation Address: 408 South Birch, Albany, MO 64402

Location Information: Gentry County, S24, T63N, R31W

Application for Authority to Construct was made for:

The addition of two new storage bins and associated 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.

AUG 28 2014

EFFECTIVE DATE

Handwritten signature of Kyla L Moore in cursive script.

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 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 start up 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 - Albany
Gentry County, S24, T63N, R31W

1. Superseding Condition
 - A. The conditions of this permit supersede the following special conditions found in the previously issued construction permit 022011-003 issued by the Air Pollution Control Program.
 1. Special Condition 1, Emission Limitation
2. PM₁₀ Emission Limitation
 - A. MFA Agri Service - Albany shall emit less than 15.0 tons of PM₁₀ in any consecutive 12-month period from the entire installation as shown in Table 1.

Table 1. Emission points of installation.

Emission Point	Process	Description	Bottleneck MHDR (tons/hr)
EP-05c	Grain Elevator	Grain Receiving	600
EP-08c	Grain Elevator	Loadout from Fill Conveyor	90
EP-08d	Grain Elevator	Gravity Loadout from Bin Spouts	510
EP-06c	Grain Elevator	Bucket Elevator	600
EP-22	Grain Elevator	Storage Bins	600
EP-12c	Grain Elevator	Haul Road	600
EP-05b	Feed Mill	Feed Receiving	30
EP-06b	Feed Mill	Internal Handling	30
EP-07	Feed Mill	Hammermill	8
EP-08b	Feed Mill	Truck Shipping	30
EP-13	Feed Mill	Bin Loading	30
EP-12b	Feed Mill	Haul Road	30
EP-09	Fertilizer Facility	Fertilizer Receiving	60
EP-10	Fertilizer Facility	Handling, Conveying	60
EP-14	Fertilizer Facility	Mixing	45
EP-11	Fertilizer Facility	Truck Shipping	45
EP-15	Fertilizer Facility	Mixer/Blender	45
EP-12	Fertilizer Facility	Haul Road	45
EP-16	Seed Treatment	Bulk Seed Receiving	36
EP-17	Seed Treatment	Bulk Seed Storage	36
EP-18	Seed Treatment	Weigh Hopper	30
EP-19	Seed Treatment	Treatment	30
EP-20	Seed Treatment	Handling, Conveying	30
EP-21	Seed Treatment	Shipping	30
EP-12a	Seed Treatment	Haul Road	30

- 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 2.A.

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3. Operational Requirement

MFA Agri Service - Albany shall keep all fungicides, insecticides, or nitrogen fixation aides in sealed containers whenever the materials are not in use. MFA Agri Service - Albany shall provide and maintain suitable, easily read, permanent markings on containers containing fungicides, insecticides, or nitrogen fixation aides used with this equipment.

4. Record Keeping and Reporting Requirements

- A. MFA Agri Service - Albany 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 - Albany 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: 2014-05-079
Installation ID Number: 075-0004
Permit Number:

MFA Agri Service - Albany
408 South Birch
Albany, MO 64402

Complete: June 2, 2014

Parent Company:
MFA Agri Service - Albany
201 Ray Young Drive
Columbia, MO 65201

Gentry County, S24, T63N, R31W

REVIEW SUMMARY

- MFA Agri Service - Albany has applied for authority to construct two new storage bins and associated equipment and requested a 15.0 ton per year PM₁₀ installation-wide limit.
- 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 880,000 bushels, which is less than the 2.5 million bushel 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 dry diammonium phosphate, urea, potash, and ammonium sulfate.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- A building enclosure is being used to control the particulate emissions (PM, PM₁₀ and PM_{2.5}) from the weigh hopper (EP-18) and the treater (EP-19) of 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 PM₁₀ are conditioned below de minimis levels. Potential emissions of PM remain at the minor source level.

- This installation is located in Gentry 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 for this review. All pollutants, except for PM, are below de minimis levels. No ambient air quality standard exists for PM, therefore modeling is not required.
- Emissions testing is not required for the equipment.
- No Operating Permit is required for this installation since the installation-wide PM₁₀ emissions are being limited to below the de minimis level.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

MFA Agri Service – Albany consists of a grain elevator, feed mill, bulk fertilizer facility, and seed treatment unit in Albany, Missouri. The current maximum hourly design rate (MHDR) of the grain process is 600 tons per hour (tph) which is bottlenecked by the grain shipping. The MHDR of the feed mill process is 8 tph and bottlenecked by the hammermill. The MHDR of the bulk dry fertilizer process is 45 tph and bottlenecked by the mixer. The MHDR of the seed treating process is 30 tph and bottlenecked by the seed treater. Because of this installation-wide limit, MFA will not be required to obtain an Operating Permit.

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

Table 2: Permit History

Permit Number	Description
022011-003	Addition of bulk seed handling and fungicide treatment process
0179-002	Bulk fertilizer dry blending facility

PROJECT DESCRIPTION

This project consists of the addition of two 290,000 bushel corrugated steel bins (EP-22), a 20,000 bushels per hour bucket elevator, two 20,000 bushel per hour enclosed fill conveyors for the new bins, a 20,000 bushel per hour enclosed reclaim conveyor (EP-06c) from the new bins and a 3,000 bushel per hour overhead loadout bin (EP-08c) for loading trucks. The two new bins can also loadout by gravity spouts at a combined 17,000 bushels per hour (EP-08d). The existing overhead fill conveyor for the three existing 100,000 corrugated steel bushel storage bins will be replaced by this new equipment.

With the completion of this project the existing nine corrugated grain storage bins (EP-13) on the south side of the property will be dismantled and removed. The seed cleaning business has ceased at this facility and has been removed from the grain process.

This facility is accepting a voluntary 15 ton per year limit of PM₁₀ emissions for the entire operation.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies 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 and Processes*, May 2003. PTE for the feed, dry fertilizer and bulk seed treatment processes were not calculated in this review since no modifications to these processes have been made since the issuance of Permit # 022011-003.

Haul road emissions were calculated using the method recommended in AP-42 Section 13.2.2 *Unpaved Roads*, November 2006. In order to remain conservative, each haul road PTE was calculated under the assumption that grain receiving and shipping operations will be 50% straight trucks and 50% hopper trucks. PTE for haul roads were calculated under the assumption that the unpaved road silt content is 8.3%.

The following table provides an emissions summary for this project. Existing potential emissions were taken from Permit #022011-003. Existing actual emissions were taken from the installation's 2013 EIQ. The potential emissions of this project only account for the grain handling. Potential emissions of the application represent the potential of the new and existing equipment, assuming continuous operation (8760 hours per year).

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2013 EIQ)	Potential Emissions of the Project	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	104.48	N/D	1690.85	1780.29	45.35
PM ₁₀	15.0	53.53	1.078	540.30	588.85	<15.00
PM _{2.5}	10.0	9.85	0.2006	72.62	81.72	2.08
SO _x	40.0	N/A	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A	N/A
VOC	40.0	14.93	N/D	N/A	N/A	14.93
CO	100.0	N/A	N/A	N/A	N/A	N/A
HAPs	10.0/25.0	1.42	N/D	N/A	N/A	1.42
Ethylene Glycol	10.0	1.42	N/D	N/A	N/A	1.42

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 PM10 are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

MFA Agri Service - Albany 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.

Bryce Mihalevich
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 28, 2014, received May 29, 2014, designating MFA Agri Service - Albany as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Attachment A – PM₁₀ Compliance Worksheet

MFA Agri Service - Albany
 Gentry County, S24, T63N, R31W
 Project Number: 2014-05-079
 Installation ID Number: 075-0004
 Permit Number: _____

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

(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)
Month	Materials Handled (tons)		PM ₁₀ Emission Factor (lb/ton)	Monthly PM ₁₀ Emissions (pounds)	Monthly PM ₁₀ Emissions (tons)	Previous Month's 12-Month PM ₁₀ Emissions (tons)	Monthly PM ₁₀ Emissions from Previous Year (tons)	Current 12-Month PM ₁₀ Emissions (tons)
<i>Example 08/2012</i>	<i>Grain Shipped</i>	<i>5,000</i>	<i>0.21</i>	<i>1,150</i>	<i>1.21</i>	<i>8.5</i>	<i>2.0</i>	<i>7.71</i>
	<i>Feed Shipped</i>	<i>2,500</i>	<i>0.15</i>	<i>375</i>				
	<i>Fertilizer Shipped</i>	<i>5,000</i>	<i>0.12</i>	<i>600</i>				
	<i>Seed Shipped</i>	<i>2,000</i>	<i>0.15</i>	<i>300</i>				
	<i>Grain Shipped</i>	<i>5,000</i>	<i>0.21</i>					
	<i>Feed Shipped</i>	<i>2,500</i>	<i>0.15</i>					
	<i>Fertilizer Shipped</i>	<i>5,000</i>	<i>0.12</i>					
	<i>Seed Shipped</i>	<i>2,000</i>	<i>0.15</i>					
	<i>Grain Shipped</i>	<i>5,000</i>	<i>0.21</i>					
	<i>Feed Shipped</i>	<i>2,500</i>	<i>0.15</i>					
	<i>Fertilizer Shipped</i>	<i>5,000</i>	<i>0.12</i>					
	<i>Seed Shipped</i>	<i>2,000</i>	<i>0.15</i>					
	<i>Grain Shipped</i>	<i>5,000</i>	<i>0.21</i>					
	<i>Feed Shipped</i>	<i>2,500</i>	<i>0.15</i>					
	<i>Fertilizer Shipped</i>	<i>5,000</i>	<i>0.12</i>					
	<i>Seed Shipped</i>	<i>2,000</i>	<i>0.15</i>					
	<i>Grain Shipped</i>	<i>5,000</i>	<i>0.21</i>					
	<i>Feed Shipped</i>	<i>2,500</i>	<i>0.15</i>					
	<i>Fertilizer Shipped</i>	<i>5,000</i>	<i>0.12</i>					
	<i>Seed Shipped</i>	<i>2,000</i>	<i>0.15</i>					


- a) Record the current date.
- b) Record this month's feed shipped, feed received, and fertilizer received
- c) Composite PM₁₀ emission factor for each process.
- d) Calculate using the following equation: (d) = (b) x (c)
- e) Calculate using the following equation: (e) = [(d) Grain Shipped + (d) Feed Shipped + (d) Seed Shipped + (d) Fertilizer Shipped] / 2,000
- f) Record the 12-month PM₁₀ emissions (h) from last month.
- g) Record the monthly PM₁₀ emissions (e) from this month last year.
- h) Calculate the new 12-month PM₁₀ emissions using the following equation: (h) = (e) + (f) – (g)

Note: To convert bushels to tons, multiply the number of bushels by 60 (lb/bu) and divide by 2000 (lb/ton)

APPENDIX A

Abbreviations and Acronyms

%percent	m/s meters per second
°Fdegrees Fahrenheit	Mgal 1,000 gallons
acfmactual cubic feet per minute	MW megawatt
BACT Best Available Control Technology	MHDR maximum hourly design rate
BMPs Best Management Practices	MMBtu Million British thermal units
Btu British thermal unit	MMCF million cubic feet
CAM Compliance Assurance Monitoring	MSDS Material Safety Data Sheet
CAS Chemical Abstracts Service	NAAQS ... National Ambient Air Quality Standards
CEMS Continuous Emission Monitor System	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CFR Code of Federal Regulations	NO_x nitrogen oxides
CO carbon monoxide	NSPS New Source Performance Standards
CO₂ carbon dioxide	NSR New Source Review
CO_{2e} carbon dioxide equivalent	PM particulate matter
COMS Continuous Opacity Monitoring System	PM_{2.5} particulate matter less than 2.5 microns in aerodynamic diameter
CSR Code of State Regulations	PM₁₀ particulate matter less than 10 microns in aerodynamic diameter
dscf dry standard cubic feet	ppm parts per million
EQ Emission Inventory Questionnaire	PSD Prevention of Significant Deterioration
EP Emission Point	PTE potential to emit
EPA Environmental Protection Agency	RACT Reasonable Available Control Technology
EU Emission Unit	RAL Risk Assessment Level
fps feet per second	SCC Source Classification Code
ft feet	scfm standard cubic feet per minute
GACT Generally Available Control Technology	SIC Standard Industrial Classification
GHG Greenhouse Gas	SIP State Implementation Plan
gpm gallons per minute	SMAL Screening Model Action Levels
gr grains	SO_x sulfur oxides
GWP Global Warming Potential	SO₂ sulfur dioxide
HAP Hazardous Air Pollutant	tph tons per hour
hr hour	tpy tons per year
hp horsepower	VMT vehicle miles traveled
lb pound	VOC Volatile Organic Compound
lbs/hr pounds per hour	
MACT Maximum Achievable Control Technology	
µg/m³ micrograms per cubic meter	



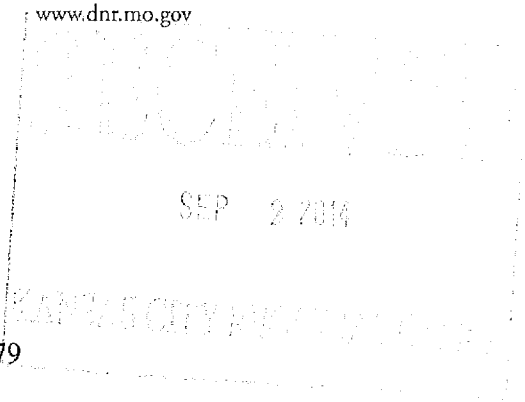
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

AUG 28 2014

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



RE: New Source Review Permit - Project Number: 2014-05-079

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, 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 Bryce Mihalevich, at the Department of Natural Resources' 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

Susan Heckenkamp
 New Source Review Unit Chief

AP
COUNTY: <i>Gentry</i>
NAME: <i>MFA Exchange</i>
RED, GREEN M.P.
GENERAL COMPLAINT

SH:bml

Enclosures

c: Kansas City Regional Office
 PAMS File: 2014-05-079

Permit Number: **082014-020**

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 To learn more about the Missouri Department of Natural Resources visit dnr.mo.gov.