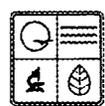


**PERMIT BOOK**

**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: **072014-010**

Project Number: 2014-05-022  
Installation Number: 041-0017

Parent Company: MFA Incorporated

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

Installation Name: MFA Agri Service - Salisbury

Installation Address: 304 W. Front St., Salisbury, MO 65281

Location Information: Chariton County, S3, T53N, R17W

Application for Authority to Construct was made for:  
The addition of a new storage bin 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.

**JUL 22 2014**

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 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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Permit No.	
Project No.	2014-05-022

**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 - Salisbury  
Chariton County, S3, T53N, R17W

1. **Superseding Condition**  
The conditions of this permit supersede all special conditions found in the previously issued construction permit 1286-008 issued by the Air Pollution Control Program.
2. **PM<sub>10</sub> Emission Limitation**
  - A. MFA Agri Service - Salisbury shall emit less than 15.0 tons of PM<sub>10</sub> 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-01a	Grain Elevator	South Grain Receiving	522
EP-01b	Grain Elevator	North Grain Receiving	522
EP-02a	Grain Elevator	South Elevator Loadout	522
EP-02b	Grain Elevator	North Elevator Loadout	522
EP-03a	Grain Elevator	South Bucket Elevator	522
EP-03b	Grain Elevator	North Bucket Elevator	522
EP-04a	Grain Elevator	South Bins	522
EP-04b	Grain Elevator	North Bins	522
EP-05	Grain Elevator	Grain Dryer	30
EP-06	Feed Mill	Bulk Loadout	24
EP-07	Feed Mill	Bucket Elevator	24
EP-08	Feed Mill	Bin Loading	24
EP-09	Feed Mill	Rollermill	24
EP-10a	Feed Mill	Hammermill	24
EP-10b	Fertilizer Facility	Dry Fertilizer Receiving	45
EP-11	Fertilizer Facility	Loadout	45
EP-12	Fertilizer Facility	Belt Conveyor	45
EP-13	Fertilizer Facility	Storage	45
EP-14	Fertilizer Facility	Weigh Hopper	45
EP-15	Fertilizer Facility	Mixer	45
EP-16	Seed Treatment	Cleaning Bins	6
EP-17	Seed Treatment	Seed Cleaner	6

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Permit No.	
Project No.	2014-05-022

**SPECIAL CONDITIONS:**

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

- 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.
3. Record Keeping and Reporting Requirements
- A. MFA Agri Service - Salisbury 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. These records shall include MSDS for all materials used.
  - B. MFA Agri Service - Salisbury 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: 2014-05-022  
Installation ID Number: 041-0017  
Permit Number:

MFA Agri Service - Salisbury  
304 W. Front St.  
Salisbury, MO 65281

Complete: May 30, 2014

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

Chariton County, S3, T53N, R17W

REVIEW SUMMARY

- MFA Agri Service - Salisbury has applied for authority to construct a new storage bin and associated equipment.
- HAP emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- 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 in association 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 de minimis levels. Potential emissions of PM remain at the minor source level.
- This installation is located in Chariton 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. No modeling standard exists for PM.

- 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

This installation consists of a grain elevator, feed mill, and a bulk fertilizer facility in Salisbury, Missouri. The maximum hourly design rate (MHDR) of the grain elevator is 522 tons per hour (tph) and feed mill is 24 (tph), both bottlenecked by the respective loadouts. The fertilizer facility has an MHDR of 45 tons per hour bottlenecked by the fertilizer weigh hopper. The seed cleaning facility is currently not in operation.

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

Table 2: Permit History

Permit Number	Description
1286-008	165,000 bushel grain bin

## PROJECT DESCRIPTION

This project consists of the addition of a new 160,000 bushel corrugated steel bin that is 60' diameter and 24 rings tall on the sidewall. The new bin will be filled by the addition of a new enclosed fill conveyor extending from the grain bin immediately east of the new bin with a two-way valve installed to direct grain into the new bin or the original bin east of this. There will be a reclaim conveyor under the load trucks only. This is a short bucket elevator that has no purpose but to load trucks allowing grain to be received at the current receiving points while trucks are being loaded.

With the completion of the new storage bin installation, this facility is accepting a voluntary 15 ton per year limit of PM<sub>10</sub> emissions for the entire operation.

## 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 and Processes*, May 2003. PTE for feed processes were calculated using emission factors for grain receiving, handling, storage, mixing, milling, and shipping. 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 fertilizer processes were evaluated using emission factors obtained from WebFIRE (Factor Information Retrieval System), EPA's online emission factor repository. PM<sub>2.5</sub> emission factors do not exist for fertilizer handling. The emission factor (0.02 pounds per ton of fertilizer, SCC 3-01-027-09) was used for PM, PM<sub>10</sub>, and PM<sub>2.5</sub>. According to MFA Incorporated, small trucks with trailers will primarily be used for receiving and shipping fertilizer materials. Thus, haul road emissions for the fertilizer plant was calculated with an average truck weight of 6 tons.

The following table provides an emissions summary for this project. Existing potential emissions were not determined for this project since MFA Agri Service is requesting a 15 ton per year limit of PM<sub>10</sub> for the entire facility. Existing actual emissions were taken from the installation's 2013 EIQ. 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 Application	New Installation Conditioned Potential
PM	25.0	N/D	N/D	2253.07	41.85
PM <sub>10</sub>	15.0	N/D	3.8917	807.11	<15.00
PM <sub>2.5</sub>	10.0	N/D	0.6604	130.36	2.42
SOx	40.0	N/A	N/A	N/A	N/A
NOx	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 (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM<sub>10</sub> are conditioned below de minimis levels for the entire installation.

### APPLICABLE REQUIREMENTS

MFA Agri Service - Salisbury 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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Bryce Mihalevich  
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 May12, 2014, received May 12, 2014, 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.

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

MFA Agri Service - Salisbury  
 Morgan County, S32, T43N, R17W  
 Project Number: 2014-05-022  
 Installation ID Number: 141-0003  
 Permit Number: \_\_\_\_\_

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

(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)
Month	Materials Handled (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 08/2012</i>	<i>Grain Shipped</i>	<i>5,000</i>	<i>0.23</i>	<i>1,100</i>	<i>2.153</i>	<i>8.5</i>	<i>2.0</i>	<i>8.653</i>
	<i>Feed Shipped</i>	<i>2,500</i>	<i>0.99</i>	<i>2,475</i>				
	<i>Fertilizer Shipped</i>	<i>5,000</i>	<i>0.14</i>	<i>700</i>				
	<i>Grain Shipped</i>		<i>0.23</i>					
	<i>Feed Shipped</i>		<i>0.99</i>					
	<i>Fertilizer Shipped</i>		<i>0.14</i>					
	<i>Grain Shipped</i>		<i>0.23</i>					
	<i>Feed Shipped</i>		<i>0.99</i>					
	<i>Fertilizer Shipped</i>		<i>0.14</i>					
	<i>Grain Shipped</i>		<i>0.23</i>					
	<i>Feed Shipped</i>		<i>0.99</i>					
	<i>Fertilizer Shipped</i>		<i>0.14</i>					
	<i>Grain Shipped</i>		<i>0.23</i>					
	<i>Feed Shipped</i>		<i>0.99</i>					
	<i>Fertilizer Shipped</i>		<i>0.14</i>					
	<i>Grain Shipped</i>		<i>0.23</i>					
	<i>Feed Shipped</i>		<i>0.99</i>					
	<i>Fertilizer Shipped</i>		<i>0.14</i>					
	<i>Grain Shipped</i>		<i>0.23</i>					
	<i>Feed Shipped</i>		<i>0.99</i>					
	<i>Fertilizer Shipped</i>		<i>0.14</i>					

- a) Record the current date.
- b) Record this month's feed shipped, feed received, and fertilizer received
- c) Composite PM<sub>10</sub> 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 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 using the following equation: (h) = (e) + (f) – (g)

**A rolling 12-month total (h) less than 15.0 tons 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>SIC</b> ..... Standard Industrial Classification
<b>GHG</b> ..... Greenhouse Gas	<b>SIP</b> ..... State Implementation Plan
<b>gpm</b> ..... gallons per minute	<b>SMAL</b> ..... Screening Model Action Levels
<b>gr</b> ..... grains	<b>SO<sub>x</sub></b> ..... sulfur oxides
<b>GWP</b> ..... Global Warming Potential	<b>SO<sub>2</sub></b> ..... sulfur dioxide
<b>HAP</b> ..... Hazardous Air Pollutant	<b>tph</b> ..... tons per hour
<b>hr</b> ..... hour	<b>tpy</b> ..... tons per year
<b>hp</b> ..... horsepower	<b>VMT</b> ..... vehicle miles traveled
<b>lb</b> ..... pound	<b>VOC</b> ..... Volatile Organic Compound
<b>lbs/hr</b> ..... pounds per hour	
<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 - Salisbury  
201 Ray Young Drive  
Columbia, MO 65201

RE: New Source Review Permit - Project Number: 2014-05-022

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 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

SH:bml

Enclosures

c: Northeast Regional Office  
PAMS File: 2014-05-022

Permit Number:

*Celebrating 40 years of taking care of Missouri's natural resources.  
To learn more about the Missouri Department of Natural Resources visit [dnr.mo.gov](http://dnr.mo.gov).*