

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: 042017-003

Project Number: 2016-12-065
Installation Number: 151-0017

Parent Company: MFA Exchange - Meta

Parent Company Address: 501 West 4th Street, Meta, MO 65058

Installation Name: MFA Exchange - Meta

Installation Address: 501 West 4th Street, Meta, MO 65058

Location Information: Osage County, S41, T8N, R11

Application for Authority to Construct was made for:
Installation of a new feed mill. 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.


Prepared by
Sam Anzalone
New Source Review Unit


Director or Designee
Department of Natural Resources
APR 12 2017
Effective Date

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 Enforcement and Compliance Section of 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 Enforcement and Compliance Section of the Department's 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's 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 the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's 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 using the contact information below.

Contact Information:
Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:
<http://dnr.mo.gov/regions/>

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 Exchange - Meta
Osage County, S41, T8N, R11

1. Superseding Condition

The conditions of this permit supersede all special conditions found in the previously issued construction permit 122016-002 issued by the Air Pollution Control Program.

2. PM₁₀ Emission Limitation

A. MFA Exchange - Meta shall emit less than 15.0 tons of PM₁₀ in any consecutive 12-month period from the entire installation (see table 1).

Table 1. List of emission points at MFA Exchange Meta

Emission Point	Description	Fertilizer Plant
EP-01	Grain/Feed Receiving	
EP-02	Grain/Feed Loading	
EP-03	Mixed Feed Loading	
EP-04	Fertilizer Receiving	A
EP-05	Fertilizer Mixing	A
EP-06	Fertilizer Loading	A
EP-07	Haul Road	A & B
EP-08	Fertilizer Receiving	B
EP-08A	Fertilizer Receiving	B
EP-08B	Fertilizer Blending	B
EP-09	Fertilizer Blending	B
EP-09A	Fertilizer Loadout	B
EP-10	Fertilizer Loadout	B
EP-11	Feed Receiving	
EP-12	Feed Shipping	
EP-13	Underground Conveyor	
EP-14	Raw Feed Conveyor	
EP-15	Scale Hopper loading	
EP-16	Mixer Loading	
EP-17	Mixer Conveyor	
EP-18	Mixer Discharge Conveyor	
EP-19	Auger to Roller Mill	
EP-20	Roller Mill	
EP-21	Roller Mill Discharge Conveyor	

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 Exchange - Meta 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 Exchange - Meta 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 shows an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW

Project Number: 2016-12-065

Installation ID Number: 151-0017

Permit Number:

042017-003

Installation Address:

MFA Exchange - Meta
501 West 4th Street
Meta, MO 65058

Parent Company:

MFA Exchange - Meta
501 West 4th Street
Meta, MO 65058

Osage County, S41, T8N, R11

REVIEW SUMMARY

- MFA Exchange - Meta has applied for authority to install a new feed mill.
- The application was deemed complete on December 28, 2016.
- HAP emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the installation.
 - NSPS Subpart DD, Standards of Performance for Grain Elevators does not apply because the permanent storage capacity is less than 2.5 million bushels.
 - NSPS Subpart T, Phosphate Fertilizer Industry: Wet-Process Phosphoric Acid Plants, NSPS Subpart U, Phosphate Fertilizer Industry: Superphosphoric Acid Plants, NSPS Subpart V, Phosphate Fertilizer Industry: Diammonium Phosphate Plants, NSPS Subpart W, Phosphate Fertilizer Industry: Triple Phosphate Plants , NSPS Subpart X, Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities does not apply because the installation does not produce diammonium phosphate fertilizer or handle fresh diammonium phosphate fertilizer.
- 10 CSR 10-3.160, *Restriction of Emission of Fluorides From Diammonium Phosphate Fertilizer Production* does not apply because the installation does not produce diammonium phosphate fertilizer.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
 - MACT Subpart DDDDDDD, National Emission Standards for Hazardous Air Pollutant for Area Sources: Prepared Feeds Manufacturing does not

apply because the installation does not add any materials containing chromium or manganese to any product manufactured at the facility.

- 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 are above the de minimis level, but below the major source level. Potential emissions of PM₁₀ and PM_{2.5} are conditioned below de minimis levels.
- This installation is located in Osage 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 the application are below de minimis levels.
- Emissions testing is not required for the equipment as a part of this permit. Testing may be required as part of other state, federal or applicable rules.
- No Operating Permit is required for this installation.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

MFA Exchange is a de minimis source that operates a grind and mix feed operation on Route B in Meta, Missouri, Osage County. This facility stores corn, feed supplements, and mixed feeds. It operates a roller mill and hammer mill and bag-mixed feed in the mill house. MFA Exchange has an existing "plant foods" facility which stores and dry mixes various fertilizers such as diammonium phosphate triple superphosphate, ammonium nitrate, potash, and urea.

The following New Source Review permits have been issued to MFA Exchange - Meta from the Air Pollution Control Program.

Table 2: Permit History

Permit Number	Description
0179-003	Construction of a bulk fertilizer dry blending facility
0889-003	Construction of a grind and mix feed operation
1198-002	Construction of overhead bins and increased annual production
122016-002	Construction of fertilizer dry blending

PROJECT DESCRIPTION

MFA Exchange – Meta is installing a new flat storage, commodity style feed mill. This feed will be made out of corn. The ingredients will be received into a pit by a straight truck (EP-11). An underground conveyor (EP-13) will take the ingredients to a leg (EP-14). The leg will discharge into an overhead conveyor which will drop the ingredients in a feed bay (EP-15). The feed is then delivered to the scale hopper by loader (EP-16). The scale hopper feeds into the mixer (EP-17). After the proper blending time (20 tph), the mixed feed will travel by conveyor to an outside overhead bin (EP-18). The mixed feed is loaded on a delivery truck from an overhead bin (EP-12). The corn is taken by auger to a roller mill (EP-19) from the corn bin. The roller mill (EP-20) discharges directly into the receiving conveyor (EP-21).

The MHDR is bottlenecked by the mixer at 20 tph.

The haul roads (EP-7) are unpaved and uncontrolled. The additional haul roads needed to install the new feed mill is 1,191 feet for receiving and 1,225 feet for shipping.

This project was aggregated with Permit 122016-002 (Project 2016-12-013) because they were submitted within 2 years of each other.

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, 9.9.1 Grain Elevator & Processes (May 2003), dry corn milling, for all corn feed processing. The emissions were considered uncontrolled.

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 Permit 1198-002. Existing actual emissions were taken from the installation's 2015 EIQ. Permit 122016-002 emissions are included because of project aggregation. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year).

Table 3: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2015 EIQ)	Potential Emissions of the Permit 122016-002	Potential Emissions of the project 2016-12-065	New Installation Conditioned Potential
PM	25.0	N/D	N/D	78.7	64.91	>25.0
PM ₁₀	15.0	<15	0.43	42.9	30.03	<15.0
PM _{2.5}	10.0	N/D	0.08	12.1	1.59	N/D
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	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A	N/A
GHG (CO ₂ e)	N/A	N/A	N/A	N/A	N/A	N/A
GHG (mass)	N/A	N/A	N/A	N/A	N/A	N/A
HAPs	10.0/25.0	N/A	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 are above the de minimis level, but below the major source level. Potential emissions of PM₁₀ are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

MFA Exchange - Meta 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

- *Start-Up, Shutdown, and Malfunction Conditions*, 10 CSR 10-6.050
- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
 - Per 10 CSR 10-6.110(4)(B)2.B(II) and (4)(B)2.C(II) a full EIQ is required for the first full calendar year the equipment (or modifications) approved by this permit are in operation.

- *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*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated December 28, 2016, received December 28, 2016, designating MFA Exchange - Meta as the owner and operator of the installation.

Attachment A – PM₁₀ Compliance Worksheet

MFA Exchange - Meta
 Osage County, S41, T8N, R11
 Project Number: 2016-12-065
 Installation ID Number: 151-0017
 Permit Number:

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

(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)
(Date/Year)	Monthly Material Received (tons)		PM ₁₀ Composite Emission Factor (lb/ton)	Monthly PM ₁₀ Emissions (pounds)	Monthly PM ₁₀ Emissions (tons)	Previous Month's 12-Month Rolling Total PM ₁₀ Emissions (tons)	Monthly PM ₁₀ Emissions from Previous Year (tons)	Current 12-Month Rolling Total PM ₁₀ Emissions (tons)
<i>Example</i>	<i>Grain/Seed</i>	<i>5,000</i>	<i>0.110</i>	<i>550</i>	<i>1.96</i>	<i>10.5</i>	<i>1.6</i>	<i>10.9</i>
	<i>Fertilizer A</i>	<i>5,000</i>	<i>0.189</i>	<i>945</i>				
	<i>Fertilizer B</i>	<i>5,000</i>	<i>0.142</i>	<i>710</i>				
	<i>Feed Mill</i>	<i>5,000</i>	<i>0.343</i>	<i>1,715</i>				
	<i>SSM^(b)</i>							
	<i>Grain/Seed</i>		<i>0.110</i>					
	<i>Fertilizer A</i>		<i>0.189</i>					
	<i>Fertilizer B</i>		<i>0.142</i>					
	<i>Feed Mill</i>		<i>0.343</i>					
	<i>SSM^(b)</i>							
	<i>Grain/Seed</i>		<i>0.110</i>					
	<i>Fertilizer A</i>		<i>0.189</i>					
	<i>Fertilizer B</i>		<i>0.142</i>					
	<i>Feed Mill</i>		<i>0.343</i>					
	<i>SSM^(b)</i>							

*The instructions for properly tracking emissions using this tracking sheet may be found on the following page.

Attachment A – PM₁₀ Compliance Worksheet

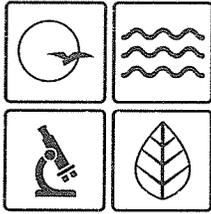
- a) Record the date (month/year)
- b) Record this month's grain/seed, fertilizer and feed ingredients received.
- c) PM₁₀ composite emission factor for each process.
- d) Calculate using the following equation: $(d) = (b) \times (c)$.
- e) Calculate using the following equation: $(e) = [(d) \text{ for grain/seed received} + (d) \text{ for fertilizer received} + (d) \text{ for feed mill received}] / 2,000 + \text{SSM PM}_{10} \text{ Emissions (Tons)}$
- f) Record the 12-month rolling total PM₁₀ emissions (h) from last month.
- g) Record the monthly PM₁₀ emissions (e) from this month last year.
- h) Calculate the new 12-month rolling total PM₁₀ emissions. $(h) = (e) + (f) - (g)$
- i) Start up, Shut down and Malfunction PM₁₀ Emissions: As reported to the Air Pollution Control Program's Compliance/Enforcement Section according to the provisions of 10 CSR 10-6.050

A 12-month Rolling Total less than 15.0 tons of PM₁₀ indicates compliance with Special Condition 2.A

APPENDIX A

Abbreviations and Acronyms

%percent	Mgal1,000 gallons
°Fdegrees Fahrenheit	MWmegawatt
acfmactual cubic feet per minute	MHDRmaximum hourly design rate
BACTBest Available Control Technology	MMBtuMillion British thermal units
BMPsBest Management Practices	MMCFmillion cubic feet
BtuBritish thermal unit	MSDSMaterial Safety Data Sheet
CAM Compliance Assurance Monitoring	NAAQSNational Ambient Air Quality Standards
CASChemical Abstracts Service	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CEMS Continuous Emission Monitor System	NO_xnitrogen oxides
CFRCode of Federal Regulations	NSPSNew Source Performance Standards
COcarbon monoxide	NSRNew Source Review
CO₂carbon dioxide	PMparticulate matter
CO_{2e}carbon dioxide equivalent	PM_{2.5}particulate matter less than 2.5 microns in aerodynamic diameter
COMSContinuous Opacity Monitoring System	PM₁₀particulate matter less than 10 microns in aerodynamic diameter
CSRCode of State Regulations	ppmparts per million
dscfdry standard cubic feet	PSDPrevention of Significant Deterioration
EIQEmission Inventory Questionnaire	PTEpotential to emit
EPEmission Point	RACTReasonable Available Control Technology
EPAEnvironmental Protection Agency	RALRisk Assessment Level
EUEmission Unit	SCCSource Classification Code
fpsfeet per second	scfmstandard cubic feet per minute
ftfeet	SDSSafety Data Sheet
GACTGenerally Available Control Technology	SICStandard Industrial Classification
GHGGreenhouse Gas	SIPState Implementation Plan
gpmgallons per minute	SMALScreening Model Action Levels
grgrains	SO_xsulfur oxides
GWPGlobal Warming Potential	SO₂sulfur dioxide
HAPHazardous Air Pollutant	tphtons per hour
hrhour	tpytons per year
hphorsepower	VMTvehicle miles traveled
lbpound	VOCVolatile Organic Compound
lbs/hrpounds per hour	
MACTMaximum Achievable Control Technology	
µg/m³micrograms per cubic meter	
m/smeters per second	



Missouri Department of

dnr.mo.gov

NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

APR 12 2017

Mr. Rick Brune
Manager
MFA Exchange - Meta
PO Box 67
Meta, MO 65058

RE: New Source Review Permit - Project Number: 2016-12-065

Dear Mr. Brune:

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.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

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, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.oa.mo.gov/ahc.



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Mr. Rick Brune
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If you have any questions regarding this permit, please do not hesitate to contact Sam Anzalone, 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:saj

Enclosures

c: Northeast Regional Office
PAMS File: 2016-12-065

Permit Number: **042017-003**