

## 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: **062014-005**

Project Number: 2013-10-054  
Installation Number: 195-0029

Parent Company: Central Missouri AGRIService, LLC

Parent Company Address: P.O. Box 549, Marshall, MO 65340

Installation Name: Central Missouri AGRIService, LLC - Malta Bend

Installation Address: 1 Pacific Street, Malta Bend, MO 65339

Location Information: Saline County, S19, T51N, R22W

Application for Authority to Construct was made for:  
Construction of a new dry fertilizer distribution facility. 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.

**JUN 12 2014**

EFFECTIVE DATE

Handwritten signature of Kyma L. Moore in black ink.  
\_\_\_\_\_  
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.

Page No.	3
Permit No.	
Project No.	2013-10-054

**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."*

Central Missouri AGRIService, LLC - Malta Bend  
Saline County, S19, T51N, R22W

1. PM<sub>10</sub> Emission Limitation
  - A. Central Missouri AGRIService, LLC - Malta Bend shall emit less than 15.0 tons of PM<sub>10</sub> in any consecutive 12-month period from this project's emission points listed in Table 2.
  - 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. Documented Haul Road Control

Haul roads shall be maintained in accordance with at least one of the following options when the plant is operating.

  - A. Application of Chemical Dust Suppressants
    - 1) The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
    - 2) The quantities of the chemical dust suppressant shall be applied and maintained in accordance with the manufacturer's recommendation (if available) and in sufficient quantities to achieve control of fugitive emissions from these areas while the plant is operating.
    - 3) The operator shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator shall keep these records with the plant for not less than five (5) years and make these records available to Department of Natural Resources personnel upon request.

Page No.	4
Permit No.	
Project No.	2013-10-054

### SPECIAL CONDITIONS:

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

- B. Application of Water-Documented Daily
  - 1) The operator shall apply water to unpaved areas. Water shall be applied at a rate of 100 gallons per day per 1,000 square feet of unpaved or untreated surface area while the plant is operating.
  - 2) Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
  - 3) Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.
  - 4) The operator shall record the date and volume of water application or the amount of precipitation that day. The operators shall also record the rationale for not watering (e.g. freezing conditions or not operating).
  - 5) The operator shall keep these records with the plant for not less than five (5) years, and the operator shall make these records available to Department of Natural Resources personnel upon request.
3. Record Keeping and Reporting Requirements
  - A. Central Missouri AGRIService, LLC - Malta Bend 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. Central Missouri AGRIService, LLC - Malta Bend 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 (5) REVIEW

Project Number: 2013-10-054  
Installation ID Number: 195-0029  
Permit Number:

Central Missouri AGRIService, LLC - Malta Bend      Complete: October 22, 2013  
1 Pacific Street  
Malta Bend, MO 65339

Parent Company:  
Central Missouri AGRIService, LLC  
P.O. Box 549  
Marshall, MO 65340

Saline County, S19, T51N, R22W

REVIEW SUMMARY

- Central Missouri AGRIService, LLC - Malta Bend has applied for authority to construct a new fertilizer distribution facility.
- HAP emissions are not expected from the proposed equipment.
- Subpart DD of the New Source Performance Standards (NSPS) applies to the installation.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Chemical dust suppression or documented watering on haul roads is being used to control the PM, PM<sub>10</sub>, PM<sub>2.5</sub> emissions from the equipment 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 PM<sub>10</sub> are conditioned below the de minimis level.
- This installation is located in Saline 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 are not required for the equipment.
- Submittal of an application to amend your Basic Operating Permit application is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

AGRIService, LLC – Malta Bend operates a grain handling and dry fertilizer operation supporting the local farming community. A 1,000,000 bushel grain storage building and one fill conveyor was added in 1986, Permit Number 0886-006A. The existing licensed grain storage capacity according to the United States Department of Agriculture Farm Service Agency/ United States Warehouse Act Licensed Warehouses for Missouri for AGRIService, LLC – Malta Bend is 4,618,000 bushels (License #: 03-09514). Therefore the installation is defined as a grain terminal elevator under NSPS Subpart DD. The installation does not include a wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill, or soybean oil extraction plant. The installation stores fertilizer, but does not store fresh granular triple superphosphate. Therefore, NSPS Subpart X does not apply.

The following New Source Review permits have been issued to Central Missouri AGRIService, LLC - Malta Bend from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
0886-006A	1,000,000 bushel storage building and one fill conveyor

### PROJECT DESCRIPTION

This project is for the replacement of the existing bulk dry fertilizer plant at this facility with a new large bulk dry fertilizer distribution center for the Central Missouri AGRIService, LLC Facilities in Saline and Lafayette Counties.

The new building will be located just north of the existing grain/fertilizer operation and will be approximately 130' X 320' in size with a concrete floor over the entire area. There will be 16' concrete walls and dividers between storage bays. The building will be metal framework with a fabric covering to keep rainfall out. There will be three large storage bays that will be filled by an internal overhead tripper belt rate at 200 tons per hour. The receiving bin will be located on the west end of the building and will consist of a chainbelt conveyor feeding a bucket elevator all rated at 200 tons per hour and all transfer points are enclosed including the tripper belt. There will be an additional four small storage bays that will contain supersacks or fertilizer that will be filled by trucks backing into these bays and dumping their load. The supersack/specialty fertilizer stored in the four small bins are projected to be 3% of the throughput of the fertilizer processed at this facility. Overall plant MHDR remains at 200 tons per hour whether or not supersacks are used. Haul roads are similar for both operations and the supersacks/specialty fertilizer operation does not require conveying. With the small

percentage of product stored in the small bins and the absence of a conveying drop point for the small bins, the difference in emissions between the two scenarios are viewed as minimal. Therefore this project was calculated as if all product was conveyed and stored in the six large bins.

Major products received in the receiving system will have an oil applied on compatible products for dust suppression. The oil controls on the emission calculation have not been included as it would be difficult to separate products applied and those not receiving the application. The product will be moved by a bucket loader to either a volumetric mixing system rated at 300 tons per hour or to a vertical mixer rated at 50 tons per hour. From the mixing systems, the product is loaded out on belt conveyors into awaiting trucks. Because the filling rate for the facility is at 200 tons per hour that becomes the bottleneck for the entire operation. The plant when completely full should hold roughly 14,000 tons of fertilizer.

The new emission units for the facility are summarized in the Table 1 below.

Table 2: Project Emission Units

Emission Point	Description	Bottlenecked MHDR (tons per hour)
EP-11	Fertilizer Receiving	200
EP-12	Conveying Handling	200
EP-13	Storage Bin	200
EP-14	Loader	200
EP-15	Mixer	200
EP-16	Loadout	200
EP-17	Haul Roads and Vehicular Activity	10.213 VMT

There will approximately 1,300 feet of receiving unpaved haul road and 1,325 feet of shipping unpaved haul road. There will also be approximately 225 feet of paved vehicular activity (bucket loader) inside a building.

After completion of this project, the old plant building will be removed.

### EMISSIONS/CONTROLS EVALUATION

The fertilizer PM and PM<sub>10</sub> emission factors for EP-11 through EP-16 were obtained from the ammonium nitrate bulk loading Source Classification Code (SCC) 30102709, each at 0.02 pounds per ton of fertilizer, and the emission factor of 0.005 pounds per ton of fertilizer for PM<sub>2.5</sub>. These emission factors were obtained from WebFIRE (Factor Information Retrieval System), EPA's online emission factor repository.

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. Emissions from vehicular activity areas were calculated using the predictive equation from AP-42 Section 13.2.1 Paved Roads, January 2011. A 90% control efficiency for PM and PM<sub>10</sub> and a 40% control efficiency for PM<sub>2.5</sub> were applied to the emission calculations for the use of BMPs (chemical suppressants).

The following table provides an emissions summary for this project. Existing potential emissions were not calculated in the most recent permit which was issued in 1986. Existing actual emissions were taken from the installation's 2013 EIQ. Potential emissions of the application represent the potential of the new fertilizer equipment and haul roads 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	Project Conditioned Potential
PM	25.0	N/D	N/D	114.06	16.31
PM <sub>10</sub>	15.0	N/D	2.53	104.92	<15.0
PM <sub>2.5</sub>	10.0	N/D	0.51	26.95	3.85
SO <sub>x</sub>	40.0	N/D	N/A	N/A	N/A
NO <sub>x</sub>	40.0	N/D	N/A	N/A	N/A
VOC	40.0	N/D	N/A	N/A	N/A
CO	100.0	N/D	N/A	N/A	N/A
GHG (CO <sub>2</sub> e)	75,000 / 100,000	N/D	N/A	N/A	N/A
GHG (mass)	0.0 / 100.0 / 250.0	N/D	N/A	N/A	N/A
HAPs	10.0/25.0	N/D	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 (5) 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.

### APPLICABLE REQUIREMENTS

Central Missouri AGRIService, LLC - Malta Bend 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
- *Operating Permits*, 10 CSR 10-6.065 (amended)
- *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 Emissions From Industrial processes*, 10 CSR 10-6.400 does not apply because the emissions from this project could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. These emissions are considered to be fugitive.

## 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.

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Kathy Kolb  
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 October 21, 2013, received October 22, 2013, designating Central Missouri AGRIService, LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Webfire (Factor Information Retrieval System), EPA's online emission factor repository



## 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. John Fletcher  
General Manager  
Central Missouri AGRIService, LLC - Malta Bend  
P.O. Box 549  
Marshall, MO 65340

RE: New Source Review Permit - Project Number: 2013-10-054

Dear Mr. Fletcher:

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 and with your amended Basic Operating 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 Kathy Kolb, 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:kk1

Enclosures

c: Northeast Regional Office  
PAMS File: 2013-10-054  
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).