

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:

042016-009

Project Number: 2015-12-031

Installation Number: 141-0034

Parent Company: Ag Co-op Services, Inc.

Parent Company Address: 2420 Clinton Rd., Sedalia, MO 65301

Installation Name: Ag Co-op Services, Inc.

Installation Address: 3645 Hwy 50, Otterville, MO 65348

Location Information: Morgan County, S10, T45N, R19W

Application for Authority to Construct was made for:

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.

Handwritten signature of Chad Stephenson.

Prepared by  
Chad Stephenson  
New Source Review Unit

Handwritten signature of Kyrna L. Moore.

Director or Designee  
Department of Natural Resources  
APR 19 2016

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 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.

**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."*

Ag Co-op Services, Inc.  
Morgan County, S10, T45N, R19W

1. PM<sub>10</sub> Emission Limitation
  - A. Ag Co-op Services, Inc. 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.
  - 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. Haul Road Watering
  - A. Ag Co-op Services, Inc. shall water haul roads and vehicular activity areas whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary.
  - B. Watering may 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.
3. Capture Device Requirement – Mill Enclosure
  - A. Ag Co-op Services, Inc. shall control emissions from the roller mill using a mill enclosure as specified in the permit application. All internal handling associated with EP-02 and their drop/transfer points shall be fully enclosed. Internal handling shall not aspirate to the ambient air.
  - B. Internal handling is defined as emissions originating from any grain transfer, excluding process emission from receiving (EP-01), truck shipping (EP-06), haul roads (EP-07), and bin vents (EP-03).
  - C. Ag Co-op Services, Inc. personnel shall inspect the enclosures listed in Special Condition 3.A. on a quarterly basis for any signs of a leak, based on sight or sound. The results of the inspection shall be recorded along with documentation regarding any necessary corrective action.

**SPECIAL CONDITIONS:**

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

4. Record Keeping and Reporting Requirements
  - A. Ag Co-op Services, Inc. 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. Ag Co-op Services, Inc. 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: 2015-12-031  
Installation ID Number: 141-0034  
Permit Number:

Installation Address:  
Ag Co-op Services, Inc.  
3645 Hwy 50  
Otterville, MO 65348

Parent Company:  
Ag Co-op Services, Inc.  
2420 Clinton Rd.  
Sedalia, MO 65301

Morgan County, S10, T45N, R19W

REVIEW SUMMARY

- Ag Co-op Services, Inc. has applied for authority to install a new feed mill.
- The application was deemed complete on January 12, 2016.
- HAP emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- 40 CFR 60 Subpart DD, "Standards of Performance for Grain Elevators" does not apply to this facility because the maximum grain storage at this facility does not exceed 2.5 million bushels.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Undocumented watering is being used to control the PM, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from the haul roads and vehicular activity areas in 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 PM<sub>10</sub> are conditioned below de minimis levels. PM emissions are above de minimis, but below major thresholds.
- This installation is located in Morgan 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 counted toward major source applicability.

- Ambient air quality modeling was not performed since potential PM<sub>10</sub> emissions of the application are below de minimis levels.
- 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

Ag Co-op Services, Inc. plans to install a new animal feed manufacturing plant in Morgan County near Otterville, Missouri. The facility receives grain and various other ingredients by truck. The ingredients are then stored in storage bins until feed production begins. All grain received at this facility will be processed through the roller mill (EP-4) and mixer (EP-5). Finished product is done with bulk shipping by truck.

No permits have been issued to Ag Co-op Services, Inc. for this facility from the Air Pollution Control Program.

### PROJECT DESCRIPTION

Ag Co-op Services, Inc. has applied to construct grain receiving leg and scales, storage bins, a roller mill, an ingredient mixer and load out bins. The facility will be located at 3645 Hwy 50 in Morgan County. The facility will be capable of receiving grain and ingredients at a rate of 210 tons per hour. The mill will have an ingredient storage system consisting of 12 square ingredient bins of various sizes. The bins will contain dical, monocal, salt, fine limestone, course limestone, ground corn and whole corn soy meal. The ingredients will be taken to a roller mill and mixer. The feed will be stored in 9 square loadout bins before being shipped out by truck. The mixing process acts as the facility bottleneck of 60.0 tons per hour. After the construction of this facility, Ag Co-op Services will be capable of producing up to 60 tons of feed per hour. There is one haul road approximately 600 feet long servicing the area that will be unpaved. Additionally, there will be a storage and maneuvering area that is unpaved as well.

The following table lists the emission points and description of the equipment.

Table 1: Ag Co-op Services, Inc.

Emission Points	Equipment Description	Bottlenecked MHDR
EP-01	Grain Receiving	60 tph
EP-02	Grain Handling	60 tph
EP-03	Storage Bins	60 tph
EP-04	Roller Mill	60 tph
EP-05	Mixing Scales	60 tph
EP-06	Shipping Feed Loadout (Truck)	60 tph
EP-07	Haul Roads	60 tph

\*The MHDR varies with the type of truck doing the hauling

## 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. Grain receiving was assumed to occur through a 50/50 split of straight trucks and hopper trucks. The emission factor for the roller mill accounted for a control efficiency of a cyclone. No other emission factors without a control device are available for a roller mill. The mill at this facility will be constructed with filtered man doors in all of the ingredient and load out bins. There will be gaskets and sealed spouting and conveyors installed on all material handling. The mill enclosure is being used as the control device instead of the cyclone. Haul road emissions were calculated using AP-42, Section 13.2.2, *Unpaved Roads*, November 2006. Emissions from the haul road will be controlled (50%) by using undocumented watering

The following table provides an emissions summary for this project. Existing potential emissions and existing actual emissions were not available since this is a new facility. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year).

Table 2: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (EIQ)	Potential Emissions of the Project	Project Conditioned Potential
PM	25.0	N/A	N/A	137.77	38.57
PM <sub>10</sub>	15.0	N/A	N/A	53.88	<15.0
PM <sub>2.5</sub>	10.0	N/A	N/A	8.99	2.52
SO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
NO <sub>x</sub>	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
GHG (CO <sub>2</sub> e)	75,000 / 100,000	N/A	N/A	N/A	N/A
GHG (mass)	0.0 / 100.0 / 250.0	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, and indirectly conditioned particulate matter (PM) remains above de minimis level, but below major source levels.

## APPLICABLE REQUIREMENTS

Ag Co-op Services, Inc. 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*
  - 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.
- No Operating Permit is required for this installation because Ag Co-op Services, Inc. is requesting a de minimis limit for the entire facility.
- *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 10, 2015, received December 15, 2015, designating Ag Co-op Services, Inc. as the owner and operator of the installation.



## 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. Ronnie Heitman  
General Manager  
Ag Co-op Services, Inc.  
2420 Clinton Road  
Sedalia, MO 65301

RE: New Source Review Permit  
Project Number: 2015-12-031; Installation ID Number 141-0034

Dear Mr. Heitman:

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 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 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. You may contact the Administrative Hearing Commission by writing to them at the United States Post Office Building, 131 West High Street, Third Floor, Jefferson City, MO 65101 or by phone at (573) 751-2422 or by fax at (573) 751-5018. The Administrative Hearing Commission also has a website located at [www.oa.mo.gov/ahc](http://www.oa.mo.gov/ahc).

Mr. Ronnie Heitman  
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If you have any questions regarding this permit, please do not hesitate to contact Chad Stephenson 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:csd

Enclosures

c: Southwest Regional Office  
PAMS File: 2015-12-031

Permit Number: