



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: 082012-012

Project Number: 2012-05-045
Installation Number: 205-0009

Parent Company: Ricketts Farm Service

Parent Company Address: P.O. Box 623, Shelbina, MO 63468

Installation Name: Ricketts Farm Service

Installation Address: 538 East Maple, Shelbina, MO 63468

Location Information: Shelby County, S33, T57N, R10W

Application for Authority to Construct was made for:

The installation of a new truck scale, grain receiving pit and loadout area, grain transfer conveyors, two grain storage bins and a column dryer. 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 29 2012

EFFECTIVE DATE

Kyla L. Moore

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 startup 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 startup 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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Project No.	2012-05-045

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."

Ricketts Farm Service
Shelby County, S33, T57N, R10W

1. Particulate matter less than 10 microns in diameter (PM₁₀) Emission Limitation
 - A. Ricketts Farm Service shall emit less than 15.0 tons of PM₁₀ in any consecutive 12-month period from emission points listed below.
 - 1) Grain Receiving (EP-18)
 - 2) Grain Loadout (EP-19)
 - 3) Column Grain Dryer (EP-20)
 - 4) Internal Grain Handling (EP-21)
 - 5) Grain Bin Vents (EP-22)
 - 6) Haul Roads (HR-1 thru 4)
 - 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. Record Keeping Requirement
Ricketts Farm Service shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.
3. Reporting Requirement
Ricketts Farm Service shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedances of the limitations imposed by this permit.

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

Project Number: 2012-05-045
Installation ID Number: 205-0009
Permit Number:

Ricketts Farm Service
538 East Maple
Shelbina, MO 63468

Complete: May 14, 2012

Parent Company:
Ricketts Farm Service
P.O. Box 623
Shelbina, MO 63468

Shelby County, S33, T57N, R10W

REVIEW SUMMARY

- Ricketts Farm Service has applied for authority to install a new truck scale, grain receiving pit (EP-18) and loadout area (EP-19), grain transfer conveyors (EP-21), two grain storage bins (EP-22), and a column dryer (EP-20).
- Hazardous Air Pollutant (HAP) emissions are expected from the combustion of natural gas in the column grain dryer however in amounts less than the screening model action levels.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation. None of the currently promulgated Maximum Achievable Control Technology (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 particulate matter less than 10 microns in diameter (PM₁₀) are conditioned below de minimis levels. Potential emissions of particulate matter (PM) remain at minor source levels. Other pollutants are proportionately reduced to de minimis levels.
- This installation is located in Shelby 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 PM_{10} and $PM_{2.5}$ are below de minimis levels. PM potential emissions are above the de minimis levels but there are no modeling requirements for PM.
- Emissions testing is not required for the equipment.
- A 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

Ricketts Farm Service is an existing agricultural supply facility located in Shelby County, Missouri. The source operates a fertilizer distribution terminal, a grain elevator, and a feed mill on the same site.

No construction permits have been issued to Ricketts Farm Service from the Air Pollution Control Program. The Northeast Regional Office requested that Ricketts Farm Service submit a permit applicability determination to the Air Pollution Control Program to determine if the relocation of Ricketts Farm Service's equipment to the new building would require a permit. At that time a no permit required letter (Project # 2008-11-012) was issued for the entire installation on May 4, 2009.

PROJECT DESCRIPTION

Ricketts Farm Service is installing a new truck scale, grain receiving pit (EP-18) and loadout area (EP-19), grain transfer conveyors (EP-21), two grain storage bins (EP-22), and a column dryer (EP-20). The column dryer will replace the current column dryer at the facility. Ricketts Farm Service will be handling mainly corn which has a density of 56 pounds per bushel however, to allow Ricketts Farm Service flexibility as to what type of grains they can handle the maximum hourly receiving rate was calculated using the density of soy beans at 60 pounds per bushel. The maximum hourly receiving rate in tons per hour was calculated to be 240 tons of grain per hour. The new load out spout will have maximum hourly load out rate of 4000 bushel per hour or 120 tons of grain per hour. The grain receiving rate is bottlenecked on an annual potential to emit basis due to the lower grain load out rate. Therefore the potential emissions for all new emission points, with the exception of the column dryer, were calculated using the bottlenecked grain processing rate of 120 tons of grain per hour.

The storage bins being installed include one 100,000 bushel grain bin and one 20,000 bushel wet-holding bin. All the grain that goes through the wet-holding bin is sent through a new continuous-flow grain column dryer. The grain column dryer is fired by a 3.5 MMBtu/hr natural gas fired burner and has a capacity of 800 bushels of grain per hour or 24 tons of grain per hour. The new column grain dryer will be replacing the existing column dryer that is currently at the installation. No control devices are being used to control emissions from the new equipment being installed.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used for the grain handling were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 9.9.1, *Grain Elevators & Processes*, (May 2003). The straight truck emission factor was used for all grain receiving because it is worst case scenario. This prevents Ricketts Farm Service from having to track the number of hopper truck versus straight truck while receiving grain.

The haul emission emissions were calculated using the AP-42 Section 13.2.1, *Paved Roads*, (January 2011) and Section 13.2.2, *Unpaved Roads*, (November 2006) as portions of the haul roads are paved and portions are unpaved. No controls are being used to control emissions from the haul roads. Again only straight trucks were considered for grain receiving as it was considered the worst case and prevents Ricketts Farm Service from having to track the number of hopper truck versus straight truck while receiving grain.

The filterable particulate matter emissions from the column grain dryer were calculated using the emission factors from AP-42 Section 9.9.1, *Grain Elevators & Processes*. The combustion emissions from the natural gas used to fuel the column grain dryer, which include condensable particulate matter, were calculated using AP-42 Section 1.4, *Natural Gas Combustion*, (July 1998).

The following table provides an emissions summary for this project. Existing potential emissions were taken from an applicability determination letter dated May 4, 2009 under Project # 2008-11-012. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year).

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	*Existing Potential Emissions	Existing Actual Emissions	Potential Emissions of the Application	Application Conditioned Potential	New Installation Conditioned Potential
PM	25.0	N/D	N/A	226.78	43.30	N/D
PM ₁₀	15.0	7.33	N/A	78.57	<15.0	<22.33
PM _{2.5}	10.0	N/D	N/A	13.06	2.49	N/D
SO _x	40.0	0.01	N/A	0.009	0.002	0.002
NO _x	40.0	1.50	N/A	1.50	0.29	0.29
VOC	40.0	0.08	N/A	0.08	0.02	0.02
CO	100.0	1.26	N/A	1.26	0.24	0.24
HAPs	10.0/25.0	0.03	N/A	0.03	0.01	0.01

N/A = Not Applicable; N/D = Not Determined

*Existing PTE retrieved from an applicability determination letter, Project # 2008-11-012.

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. Potential emissions of PM remain at minor source levels. Other pollutants are proportionately reduced to de minimis levels.

APPLICABLE REQUIREMENTS

Ricketts Farm Service 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. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- *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 Particulate Matter Emissions 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.

Gerad Fox
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 11, 2012, received May 14, 2012, designating Ricketts Farm Service 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 Annual Emissions Tracking Sheet
Ricketts Farm Service 205-0009
Project Number: 2012-05-045
Permit Number:

This sheet covers the period from _____ to _____ (Copy this sheet as needed.)
(Month, Day Year) (Month, Day Year)

(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)
Month	Grain 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 Receiving</i>	<i>10,000</i>	<i>0.149</i>	<i>1540</i>	<i>0.913</i>	<i>0</i>	<i>0</i>	<i>0.913</i>
	<i>Grain Dried</i>	<i>5,000</i>	<i>0.056</i>	<i>285</i>				
	Grain Receiving		0.149					
	Grain Dried		0.056					
	Grain Receiving		0.149					
	Grain Dried		0.056					
	Grain Receiving		0.149					
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	Grain Dried		0.056					
	Grain Receiving		0.149					
	Grain Dried		0.056					

- (a) Record the current date.
 - (b) Record this month's grain handled that has been processed by either the grain receiving pit and grain column dryer.
 - (c) PM₁₀ emission factor for each process.
 - (d) (d) = (b) x (c). Do this calculation for each process.
 - (e) (e) = [(d) for grain receiving + (d) for grain drying] / 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.
- Calculate the new 12-month PM₁₀ emissions. (h) = (e) + (f) - (g) A value less than 15.0 tons of PM₁₀ indicates compliance.

Mr. Kim Ricketts
President
Ricketts Farm Service
P.O. Box 623
Shelbina, MO 63468

RE: New Source Review Permit - Project Number: 2012-05-045

Dear Mr. Ricketts:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, 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 have any questions regarding this permit, please do not hesitate to contact Gerad Fox, 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:gfl

Enclosures

c: Northeast Regional Office
PAMS File: 2012-05-045

Permit Number: