

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: 032015-011 Project Number: 2014-09-021
Installation Number: 177-0021

Parent Company: Ray-Carroll Country Grain Growers, Inc.

Parent Company Address: P.O. Box 158, Richmond, MO 64085

Installation Name: Ray Carroll County Grain Growers, Inc. - Hardin Facility

Installation Address: 202 Main Street, Hardin, MO 64035

Location Information: Ray County, S33, T52N, R26W

Application for Authority to Construct was made for:

A new fertilizer terminal and associated processing operations. There will be a receiving area with access for delivery via truck and rail, conveyors for material transport on-site, hoppers for storage and loadout. 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.

MAR 10 2015

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.

Page No.	3
Permit No.	
Project No.	2014-09-021

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."

Ray Carroll County Grain Growers, Inc. - Hardin Facility
Ray County, S33, T52N, R26W

1. PM₁₀ Emission Limitation
 - A. Ray Carroll County Grain Growers, Inc. - Hardin Facility shall emit less than 15.0 tons of PM₁₀ in any consecutive 12-month period from the emission points listed below.
 - 1) Receiving (EP-F01A, EP-F01B, EP-F01C, EP-F04)
 - 2) Headhouse and Handling (EP-F02, EP-F06)
 - 3) Storage (EP-F03, EP-F05, EP-F07)
 - 4) Loadout (EP-F08, EP-F09)
 - 5) Haul Roads & Vehicular Activity Areas (EP-F10A, EP-F10B, EP-F10C)
 - 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. Undocumented Haul Road Watering
 - A. Ray Carroll County Grain Growers, Inc. - Hardin Facility shall water haul roads 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. Record Keeping and Reporting Requirements
 - A. Ray Carroll County Grain Growers, Inc. - Hardin Facility 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.

Page No.	4
Permit No.	
Project No.	2014-09-021

SPECIAL CONDITIONS:

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

- B. Ray Carroll County Grain Growers, Inc. - Hardin Facility 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 (5) REVIEW

Project Number: 2014-09-021
Installation ID Number: 177-0021
Permit Number:

Ray Carroll County Grain Growers, Inc. - Hardin Facility Complete: October 22, 2014
Hardin Facility
47731 Hwy 10
Hardin, MO 64035

Parent Company:
Ray-Carroll Country Grain Growers, Inc.
P.O. Box 158
Richmond, MO 64085

Ray County, S33, T52N, R26W

REVIEW SUMMARY

- Ray Carroll County Grain Growers, Inc. - Hardin Facility has applied for authority to construct a new fertilizer terminal and associated processing operations. There will be a receiving area with access for delivery via truck and rail, conveyors for material transport on-site, hoppers for storage and loadout.
- 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.
- Undocumented water spray applied to haul roads, and enclosures around specified emission points, serve as controls for the particulate matter emissions from equipment and operations in this installation.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ are conditioned to de minimis levels; consequently, all remaining pollutants are limited to de minimis levels.
- This installation is located in Ray 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 to determine the ambient impact of PM₁₀ because PM₁₀ has been conditioned below de minimis levels.
- Emissions testing is not required for the equipment.
- A Basic Operating Permit is required for this installation.
- Approval of this permit is recommended with annual PM₁₀ limiting special conditions.

INSTALLATION DESCRIPTION

RCCGGI is a grain elevator and small fertilizer mixing installation located in Hardin, Missouri that receives materials via rail, straight truck, and hopper truck. Materials brought on-site consist of grain, fertilizer and micronutrients, and the materials are delivered on unpaved haul roads that are treated with undocumented water spray. Potential to emit for PM and PM₁₀ are above de minimis, but below the major source threshold; all remaining pollutants are conditioned below the de minimis levels. A basic operating permit is required for this installation to remain in compliance, and RCCGGI will have 30 days to submit the complete operating permit application to the Missouri Air Pollution Control Program, Operating Permits Unit. Table 1 (below) is a compiled history of the construction permits previously issued to this installation.

Table 1: Construction Permit History

Permit Reference Number	Description of Permit
0694-013	Replacement of a grain dryer.
0395-023	Replacement of a railcar loadout spout.
0396-017	Installation of a dry bulk fertilizer blending installation.
0597-011	Installation of two new grain receiving pits, a new elevator leg, two new pit drags, and a concrete storage area.
092002-003	Replacement of the rail loadout system and a new installation-wide emissions evaluation.

PROJECT DESCRIPTION

RCCGGI is building a new enclosed fertilizer terminal. This terminal will consist of receiving areas (EP-F01A, EP-F01B, EP-F01C, EP-F04), elevator legs and transfer conveyors (EP-F02), front-end loader operations (EP-F06), material storage (EP-F03, EP-F05, EP-F07), and loadout operations (EP-F08, EP-F09). The plant will allow access for straight delivery trucks, hopper delivery trucks, and rail cars, but will only be loading fertilizer into trucks for shipping the finished product to customers. The conservative assumption of 50/50% ratio (straight truck to hopper truck) was used to calculate the particulate matter emissions associated with truck receiving and haul roads (EP-F01A, EP-F01B, EP-F10A, EP-F10B, EP-F10C); the utilized ratio is below the percentage of straight trucks that the facility anticipates, and was proposed to avoid truck classification recordkeeping requirements.

From the receiving pits, the fertilizer is conveyed to storage piles enclosed inside of the new fertilizer mixing building (EP-F03). The facility may also receive micronutrients delivered to the fertilizer building (EP-F04, EP-F05); micronutrients and fertilizer are transferred via front-end loader (EP-F06) to hoppers (EP-F07) prior to loadout. Once a new fertilizer order is placed with RCCGGI, the desired final product is dispensed from the hoppers to a screw conveyor where the material is transferred to loadout hoppers (EP-F08) located outside of the building. Then materials are loaded into trucks for outbound shipping (EP-F09). The facility estimates receiving no more than 1000 tons per year of micronutrients. The MHDR of this mixing plant is 600 tons per hour and all potential emissions are controlled by building enclosures with an assumed 3.7% capture efficiency.

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 8.3.3 *Ammonium Nitrate Emissions and Controls*, Table 8.3-2. Emission factors for the watered haul roads and storage piles were taken from AP-42, Section 13.2.2, *Miscellaneous Sources, Unpaved Roads*, and Section 13.2.4, *Miscellaneous Sources, Aggregate Handling and Storage Piles*, respectively. Table 2: Emissions Summary provides an emissions summary for this project. The existing potential emissions are taken from the most recent permit. The existing actual emissions are taken from the 2013 EIS. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). Conditioned emissions of the application represent the potential to emit after taking a de minimis limit on particulate matter less than ten microns in aerodynamic diameter. New installation conditioned potential emissions represent the updated potential to emit from all of the on-site equipment and operations included in previous permits.

Table 2: 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	Conditioned Emissions of the Application	New Installation Conditioned Potential
PM	25.0	N/A	N/D	688.56	19.69	68.86 ³
PM ₁₀	15.0	67.40 ¹	1.35	524.58	<15.00	<30.00
PM _{2.5}	10.0	N/D	0.135	121.36	3.47	5.47
SOx	40.0	0.0	0.0	N/A	N/A	0.0
NOx	40.0	1.8	0.0	N/A	N/A	1.8
VOC	40.0	0.0	2.79	N/A	N/A	0.0
CO	100.0	0.4	0.0	N/A	N/A	0.4
GHG (mass)	0.0/100.0/250.0	N/A	N/D	N/A	N/A	N/A
HAPs ²	10.0/25.0	0.2	0.0	N/A	N/A	0.2

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

¹ Value has been corrected since previous permit 092002-003, to reflect correction of emissions estimates from permit 0597-011.

² The 10.0 tons per year limit applies to individual HAPs, and the 25.0 tons per year limit applies to the combined total emission of HAPs.

³ This pollutant was not previously included in an emissions evaluation; the value is estimated from the

calculated PM₁₀ data in permit 092002-003.

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 PM₁₀ are conditioned to de minimis levels; consequently, all remaining pollutants are limited to de minimis levels.

APPLICABLE REQUIREMENTS

Ray Carroll County Grain Growers, Inc. - Hardin Facility 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

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 PM₁₀ special conditions.

Jordan Hindman
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated September 10, 2014, received September 11, 2014, designating Ray-Carroll Country Grain Growers, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

APPENDIX A

Abbreviations and Acronyms

%	percent	m/s	meters per second
°F	degrees Fahrenheit	Mgal	1,000 gallons
acfm	actual cubic feet per minute	MW	megawatt
BACT	Best Available Control Technology	MHDR	maximum hourly design rate
BMPs	Best Management Practices	MMBtu	Million British thermal units
Btu	British thermal unit	MMCF	million cubic feet
CAM	Compliance Assurance Monitoring	MSDS	Material Safety Data Sheet
CAS	Chemical Abstracts Service	NAAQS ...	National Ambient Air Quality Standards
CEMS	Continuous Emission Monitor System	NESHAPs	National Emissions Standards for Hazardous Air Pollutants
CFR	Code of Federal Regulations	NO_x	nitrogen oxides
CO	carbon monoxide	NSPS	New Source Performance Standards
CO₂	carbon dioxide	NSR	New Source Review
CO_{2e}	carbon dioxide equivalent	PM	particulate matter
COMS	Continuous Opacity Monitoring System	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
CSR	Code of State Regulations	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
dscf	dry standard cubic feet	ppm	parts per million
EQ	Emission Inventory Questionnaire	PSD	Prevention of Significant Deterioration
EP	Emission Point	PTE	potential to emit
EPA	Environmental Protection Agency	RACT	Reasonable Available Control Technology
EU	Emission Unit	RAL	Risk Assessment Level
fps	feet per second	SCC	Source Classification Code
ft	feet	scfm	standard cubic feet per minute
GACT	Generally Available Control Technology	SDS	Safety Data Sheet
GHG	Greenhouse Gas	SIC	Standard Industrial Classification
gpm	gallons per minute	SIP	State Implementation Plan
gr	grains	SMAL	Screening Model Action Levels
GWP	Global Warming Potential	SO_x	sulfur oxides
HAP	Hazardous Air Pollutant	SO₂	sulfur dioxide
hr	hour	tph	tons per hour
hp	horsepower	tpy	tons per year
lb	pound	VMT	vehicle miles traveled
lbs/hr	pounds per hour	VOC	Volatile Organic Compound
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		

Mr. Tim Phillips
Operations Manager
Ray Carroll County Grain Growers, Inc. - Hardin Facility
P.O. Box 158
Richmond, MO 64085

RE: New Source Review Permit - Project Number: 2014-09-021

Dear Mr. Phillips:

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, if applicable, 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, whose contact information is: Administrative Hearing Commission, Truman State Office Building, Room 640, 301 W. High Street, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.oa.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Jordan Hindman, 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:jhl

Enclosures

c: Kansas City Regional Office
PAMS File: 2014-09-021

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.