



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: 08 2 0 1 2 - 0 0 3

Project Number: 2012-04-027
Installation Number: 143-0013

Parent Company: Portageville Farmers Gin, Inc.

Parent Company Address: 105 East Cotton, Portageville, MO 63873

Installation Name: Portageville Farmers Gin, Inc.

Installation Address: 105 East Cotton, Portageville, MO 63873

Location Information: New Madrid County, S31, T21N, R13E

Application for Authority to Construct was made for:

The replacement of an existing bale press with a larger bale press resulting in a debottlenecking of the process and an increase in production rate. This review was conducted in accordance with Section (5) of 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 02 2012

EFFECTIVE DATE



DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if the permittee fails to begin construction or modification within two years from the effective date of this permit. The 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.

The permittee will be in violation of 10 CSR 10-6.060 if the permittee fails to adhere to the specifications and conditions listed in the 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.

The permittee shall notify the Air Pollution Control Program of the anticipated date of startup of these air contaminant sources. The information shall be made available within 30 days of actual startup. Also, the permittee shall notify the Department of Natural Resources' Southeast Regional Office 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 and shall be made available to Department of Natural Resources' personnel upon request.

The permittee 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 the permittee chooses to appeal, the permittee 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 the permittee chooses not to appeal, this certificate, the project review and the application and associated correspondence constitutes the permit to construct. This permit allows the permittee to construct and operate the air contaminant source(s), but in no way relieves the permittee of the 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 the permittee's questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If the permittee prefers to write, please address the 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.	2012-04-027

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(12)(A)10. "Conditions required by permitting authority."

Portageville Farmers Gin, Inc.
New Madrid County, S31, T21N, R13E

1. Superseding Condition
 - A. The conditions of this permit supersede all special conditions found in the previously issued construction permit 072009-010 issued by the Air Pollution Control Program.
2. Particulate Matter Less Than 10 Microns in Diameter (PM₁₀) Emission Limitation
 - A. The permittee shall emit less than 48.5 tons of PM₁₀ in any consecutive 12-month period from the entire installation (as listed in Table 1).
 - B. The permittee shall maintain an accurate record of PM₁₀ emitted into the atmosphere from the entire installation. Attachment A or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 2.A. The permittee shall retain the records required by this permit for not less than five years and shall make them available to Missouri Department of Natural Resources' personnel upon request.
 - C. The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which the records from Special Condition 2.B indicate an exceedance of the emission limitation of Special Condition 2.A.
3. Haul Road Watering
 - A. The permittee shall water the haul road(s) 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.

Page No.	4
Permit No.	
Project No.	2012-04-027

SPECIAL CONDITIONS:

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

4. Control Device Requirement – Cyclones
 - A. The permittee shall control emission from each exhaust using high efficiency cyclones. The cyclones shall be operated and maintained in accordance with the manufacturer's specifications. The permittee shall retain the manufacturer's specifications on-site.
 - B. The permittee shall maintain an operating and maintenance log for the cyclones which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2012-04-027
Installation ID Number: 143-0013
Permit Number:

Portageville Farmers Gin, Inc.
105 East Cotton
Portageville, MO 63873

Complete:

Parent Company:
Portageville Farmers Gin, Inc.
105 East Cotton
Portageville, MO 63873

New Madrid County, S31, T21N, R13E

REVIEW SUMMARY

- The permittee has applied for authority to replace an existing bale press with a larger bale press resulting in a debottlenecking of the process and an increase in production rate.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- 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.
- High efficiency cyclones are being used to control the PM, PM₁₀, and PM_{2.5} 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 each pollutant are below the *de minimis* levels.
- This installation is located in New Madrid 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 are below *de minimis* levels.
- Emission testing is not required for the equipment.
- The permittee is required to amend their Intermediate Operating Permit renewal application, Project #2009-12-019, within 90 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Portageville Farmers Gin, Inc. is an existing cotton gin. Seed cotton is brought to the gin in large modules. A module feeder removes large debris and separates the modules. From the module feeder, the seed cotton is pneumatically conveyed to cleaners and dryers and is then sent to a gin stand. An overhead screw auger feeds the gin stands at a controlled rate. The gin stands separate the seeds from the lint using rotation saws. The cotton seed is pneumatically conveyed to a seed house for storage. The lint is cleaned and condensed into uniform bales. Mote from the lint cleaners is sent to another lint cleaner and is then condensed into bales by the mote press. The dryers are natural-gas fired. Particulate emissions are controlled by high efficiency cyclones. The following table lists the equipment located at the installation:

Table 1: Equipment List

Emission Point	Description
EP-1	Unloading
EP-2	#1 Dryer
EP-3	#2 Dryer
EP-4	Overflow Fan
EP-5 ¹	Lint Cleaners
EP-6	Battery Condenser
EP-7	Mote Fan
EP-8	Mote Trash Fan
EP-9	Master Trash Fan
EP-10	Dryer Heater
EP-11	Haul Road

¹EP-05 Lint Cleaners now contains EP-5 Lint Cleaner #1 and EP-12 Lint Cleaner #2 of Construction Permit 072009-010 per the permittee's request. EP-12 will no longer be used.

The permittee is currently operating under Intermediate Operating Permit OP2004-034. OP2004-034 expired August 19, 2009; however, the permittee shall continue to operate under OP2004-034 until a new operating permit is issued. The permittee submitted an Intermediate Operating Permit renewal application, Project #2009-12-019, received December 4, 2009. The permittee is required to amend the renewal application within 90 days of equipment startup.

The following New Source Review permits have been issued to the permittee by the Air Pollution Control Program:

Table 2: Permit History

Permit Number	Description
0293-005	Installation of a mote press
0793-004	Upgrade dryer burner
1097-014	New trash handling system; increase production limit
0798-029	Add 10 MMBtu/hr dryer burner
082000-007	Replace drying towers
072009-010	Installation of secondary lint cleaners

The installation-wide limit of 48.5 tons PM₁₀ within Construction Permit 072009-010 is being superseded and re-established by this project.

PROJECT DESCRIPTION

The permittee has applied for authority to replace an existing bale press with a larger bale press resulting in a debottlenecking of the process and an increase in production rate. The existing installation was bottlenecked by the existing 30 bales per hour bale press. The new bale press is rated at 50 bales per hour; however, the existing 33 bales per hour gin stand will create a new bottleneck limiting the new bale press and the existing equipment to 33 bales per hour resulting in an installation production increase of only 3 bales per hour. However, the installation-wide limit of 48.5 tons PM₁₀ from Construction Permit 072009-010 has been re-established in this permit; therefore, annual conditioned potential emissions of PM₁₀ remain the same.

The permittee employs high efficiency cyclones on the cotton ginning process (emission points EP-1 through EP-9) to control particulate emissions. Previous permits issued to the installation were based upon controlled emission factors, but did not contain any special conditions requiring the use of the high efficiency cyclones. A federally enforceable special condition requiring the use of the high efficiency cyclones has been included within this permit to allow for the continued usage of the controlled emission factors in emission calculations.

EMISSIONS/CONTROLS EVALUATION

PM, PM₁₀, and PM₂₅ are the primary pollutants of concern for the purpose of this review.

The emission factors used in this analysis were obtained from the U.S. EPA's Factor Information Retrieval (FIRE) Data System, 6.25 and U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 13.2.2 Unpaved Roads, November 2006. The cotton gin emission factors used already included the high efficiency cyclone control; therefore, no additional control efficiency was given. There were no PM_{2.5} emission factors available for the cotton ginning equipment; therefore PM_{2.5} emission factors were calculated using the ratio of PM_{2.5} to PM₁₀ emission factors according to AP-42 Section 9.9.1 *Grain Elevators and Processes*, May 2003 of 17 percent. Potential emissions of the application represent the potential of the equipment, assuming continuous operation (8,760 hours per year.) The following table provides an emissions summary for this project:

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions¹	Existing Actual Emissions (2011 EIQ)	Unconditioned Potential Emissions of the Installation	Conditioned Potential Emissions of the Installation
CO	100.0	1.18	N/D	N/D	N/A
CO ₂ e	100,000	N/D	N/D	N/D	N/A
NO _x	40.0	1.41	N/D	N/D	N/A
PM	25.0	N/D	N/D	447.97	137.78 ²
PM ₁₀	15.0	<48.5	6.73	157.70	<48.5
PM _{2.5}	10.0	N/D	0.16	26.96	8.29 ²
SO _x	40.0	0.01	N/D	N/D	N/A
VOC	40.0	0.08	N/D	N/D	N/A
Total HAPs	10.0/25.0	0.03	N/D	N/D	N/A

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

¹Existing potential emissions were taken from construction permit 072009-010.

²The numbers represented in this table reflect the PM and PM_{2.5} potential emissions reduction correlating to the 48.5 tons per year PM₁₀ installation-wide emission limitation.

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 each pollutant are below *de minimis* levels.

APPLICABLE REQUIREMENTS

The permittee 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 the installation, please consult the installation's operating permit.

GENERAL REQUIREMENTS:

- 10 CSR 10-6.065 *Operating Permits*
- 10 CSR 10-6.110 *Submission of Emission Data, Emission Fees and Process Information*
- 10 CSR 10-6.165 *Control of Emission of Odors*
- 10 CSR 10-6.170 *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*

- 10 CSR 10-6.220 *Restriction of Emission of Visible Air Contaminants*

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060 *Construction Permits Required*, I recommend this permit be granted with special conditions.

Alana L. Rugen, EIT
Environmental Engineer II

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 27, 2012, received April 5, 2012, designating Portageville Farmers Gin, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- U.S. EPA's Factor Information Retrieval (FIRE) Data System, 6.25.

Mr. Greg Portwood
Gin Plant Manager
Portageville Farmers Gin, Inc.
105 East Cotton
Portageville, MO 63873

RE: New Source Review Permit - Project Number: 2012-04-027

Dear Mr. Portwood:

Enclosed with this letter is your permit to construct. Please study it carefully. 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 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 Alana Rugen at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 526-0189. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

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Enclosures

c: Southeast Regional Office
PAMS File: 2012-04-027

Permit Number: