

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: **022009 - 009** Project Number: 2009-01-004

Parent Company: Caruthersville Gin, Inc.

Parent Company Address: 928 County Hwy U, Caruthersville, MO 63830

Installation Name: Caruthersville Gin, Inc.

Installation Address: 928 County Hwy U, Caruthersville, MO, 63830

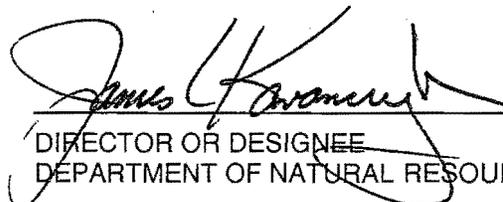
Location Information: Pemiscot County, S26, T18N, R12E

Application for Authority to Construct was made for:
Gin Stand Replacement. 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.

FEB 19 2009

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 departments' Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. 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 this (these) air contaminant source(s).

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 source(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.	2009-01-004

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."

Caruthersville Gin, Inc.
Pemiscot County, S26, T8N, R2E

1. **Superseding Condition**
The conditions of this permit supersede all special conditions found in the previously issued construction permit (Permit Number 0597-005) from the Air Pollution Control Program.
2. **Emission Limitation – Particulate Matter less than ten (10) microns in diameter (PM₁₀)**
 - A. Caruthersville Gin, Inc. shall emit less than 15.0 tons of PM₁₀ in any consecutive 12 month period from the entire installation listed in Table 2.
 - B. Caruthersville Gin, Inc. shall maintain an accurate record of PM₁₀ emitted into the atmosphere. Attachment A or an equivalent form shall be used for this purpose. Caruthersville Gin, Inc. shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
 - C. Caruthersville Gin, Inc. shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 2B indicate that the source exceeds the limitation of Special Condition Number 2A.
3. **Haul Road Watering – 50% efficiency**
Caruthersville Gin, Inc. shall water haul roads whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary.

Page No.	4
Permit No.	
Project No.	2009-01-004

SPECIAL CONDITIONS:

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

4. Control Device Requirement – Cyclones
 - A. Caruthersville Gin Inc. shall control emissions from all exhausts using high efficiency cyclones as specified in the permit application. The cyclones shall be operated and maintained in accordance with the manufacturer's specifications.
 - B. Caruthersville Gin Inc. 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: 2009-01-004
Installation ID Number: 155-0062
Permit Number:

Caruthersville Gin, Inc.
928 County Hwy U
Caruthersville, MO 63830

Complete: January 27, 2009

Parent Company:
Caruthersville Gin, Inc.
928 County Hwy U
Caruthersville, MO 63830

Pemiscot County, S26, T18N, R12E

REVIEW SUMMARY

- Caruthersville Gin, Inc. has applied for authority to install a Gin Stand Replacement.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- Cyclones are being used to control the PM₁₀ 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 PM₁₀ are below de minimis levels.
- This installation is located in Pemiscot County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- Ambient air quality modeling was not performed since potential emissions of the application are limited to de minimis levels.

- Emissions testing is not required for the equipment.
- A Basic Operating Permit application is not required for this installation.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Caruthersville Gin, Inc. is an existing synthetic *de minimis* source for all criteria pollutants and was not required to hold an operating permit. Module trucks transport cotton from the field to the gin, located at 928 County Hwy U in Caruthersville. The cotton is removed from the trailers by using a module feeder. During unloading, a 4 MMBTU/hr natural gas fueled heater processes the raw cotton. A combination conveyor and pneumatic system convey the cotton to dryers and cleaners. An auger feeds three gin stands at a controlled rate. The gin stands separate the dried cotton into trash, lint, and seed. Lint is further cleaned and processed into bales. Conveying air flows from the gin stands to a master cyclone system, where it is cleaned and discharged to the atmosphere.

The following construction permit has been issued to Caruthersville Gin, Inc. from the Air Pollution Control Program.

Table 1: Previous Construction Permits

Permit Number	Description
0597-005	Modification of an existing cotton ginning operation.

PROJECT DESCRIPTION

Caruthersville Gin, Inc. proposes replacing a single Consolidated 112 model gin stand with a Consolidated 164 model gin stand, thus making all three gin stands Consolidated 164 models. The maximum hourly design rate of the new gin stand is 12 bales per hour. The maximum hourly design rate of the installation will increase from 32 bales per hour to 36 bales per hour, potentially resulting in increased emissions from the master trash cyclone. If the maximum hourly design rate of the installation were to increase further, a new construction permit would be required.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 9.7 *Cotton Ginning* (June 1996.) The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Baseline Emissions (2005,2006 EIQ)	Emissions Increase of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	110.4	11.1	114.6	<15.0
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	0.03	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	0.03	N/A	N/A	N/A
HAPs	10.0/25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

Particulate matter (PM) is the primary air pollutant emitted from cotton ginning. Available data indicate that about 37% of the total PM emitted (following control systems) from cotton ginning is particulate matter less than 10 microns (PM₁₀). Annual emission rates are calculated by first determining existing potential emissions from permit 0597-005, 110.4 tons per year of PM₁₀. Existing potential emissions of SO_x, NO_x, VOC, CO, and HAP are from the facility's 2007 EIQ. The replacement of an existing gin stand with one of a greater throughput will result in greater potential emissions. These greater potential emissions from modified installation subtracted by the baseline of 2005 and 2006 yield the potential emissions increase of the installation, 114.6 tons per year. However, holding the entire installation to less than 15.0 tons per year of PM₁₀ allows Caruthersville Gin, Incorporated to apply for a Section 5 permit and continue operation without an operating permit. Less than 15.0 tons per year of PM₁₀, converted to pounds per year, divided by the composite emission factor of 0.847 pounds per bale yields an annual production limit of 35,410 bales.

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 limited to de minimis levels.

APPLICABLE REQUIREMENTS

Caruthersville Gin, 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

The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.

- *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 10-3.090

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-3.060

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (Section 5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

David Little
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated January 5, 2009, received January 8, 2009, designating Caruthersville Gin, Inc as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southeast Regional Office Site Survey, dated January 28, 2009.

