



OCT 23 2019

Mr. Gary Hayes  
Manager  
Caruthersville Gin, Inc.  
928 County Highway U  
Caruthersville, MO 63830

RE: New Source Review Permit Amendment/Correction - Permit Number: 022009-009C  
Project Number: 2019-08-054; Installation Number: 155-0062

Dear Mr. Hayes:

Your Construction Permit 022009-009B is being amended in response to an evaluation of stack sampling data collected as part of a study to better characterize and quantify emissions from cyclones controlling ginning process emissions. The study was conducted at seven cotton gins throughout the cotton belt by the U.S. Department of Agriculture Agricultural Research Service (USDA/ARS) and Oklahoma State University. Funding and advisory groups for the project included entities from local, state, and national industry groups; state and federal government agencies; and Texas A&M University. A single certified stack sampling company, Reliable Emissions Measurements (Auberry, CA), conducted the tests at all seven gins. Boykin, Buser, and Whitelock were the primary researchers for the project and published results in sixty-eight peer reviewed journal articles in the Journal of Cotton Science from 2013 to 2015.

EPA Method 17 (M17) was one of two methods determined by the advisory groups to be used for stack sampling at each gin and related to measurement of total Particulate Matter (PM). Laser diffraction analysis of the M17 samples was used to determine the fraction of total particulate matter collected that was associated with particulate matter having an effective diameter less than or equal to ten (10) microns or less (PM<sub>10</sub>) and particulate matter having an effective diameter less than or equal to two and one-half (2.5) microns or less (PM<sub>2.5</sub>). The Air Pollution Control Program's Permit and Compliance/Enforcement Sections have concurred that the M17 results coupled with the laser diffraction analysis allows for calculation of the most accurate PM<sub>10</sub> and PM<sub>2.5</sub> emission factors available as compared to: 1) EPA's AP-42 *Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources, Fifth Edition*; and 2) the second method determined by the advisory groups to be used for stack sampling at each gin, EPA Method 201A (M201A)). The reasoning behind the concurrence is based on two factors. First, the low data quality ratings in AP-42 for emissions factors related to cotton ginning operations. Second, well-documented issues with Method 201A results occurred that rendered the data unsatisfactory for permitting and compliance purposes.

In addition to changes associated with the availability of more accurate ginning process emission factors, your Construction Permit 022009-009B is being updated to include consideration of mote bale shipping, seed handling, seed shipping, and trash shipping emissions.



Mr. Hayes

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Your permit is revised by supersession of Special Condition 3 with the revised Special Condition 3 on the attached pages and replacement of Attachment A with the revised Attachment A on the attached pages.

Contributions to the compliance emission factors included in Attachment A are shown in Table 1:

Compliance Emission Factor Components. In order to ensure you are using the correct compliance emission factors, please use the replacement Attachment A, or equivalent methodology, for tracking your PM<sub>10</sub> emissions. Demonstration of compliance with the limitation(s) imposed by your permit, as amended, shall begin on October 1, 2019 at zero (0.0) tons of rolling consecutive 12-month PM<sub>10</sub> emissions using your revised compliance emission factors. No fees are owed to the Air Pollution Control Program for this permit amendment.

**Table 1: Compliance Emission Factor Components**

<i>Equipment Description</i>	<i>Controls</i>	<i>Unit of Measure</i>	<i>Emission Factor (lb PM<sub>10</sub>/unit)</i>
Unloading	HE Cyclones	bale	0.185
First Stage Seed Cotton Cleaning	HE Cyclones	bale	0.159
Burr and Stick Machine	HE Cyclones	bale	0.159
Second Stage Seed Cotton Cleaning	HE Cyclones	bale	0.0555
Overflow	HE Cyclones	bale	0.0213
Master Trash Fan	HE Cyclones	bale	0.106
Combined Lint Cleaning	HE Cyclones	bale	0.0861
Mote Fan	HE Cyclones	bale	0.0200
Battery Condenser	HE Cyclones	bale	0.0171
<b>Total Ginning Process</b>	<b>HE Cyclones</b>	<b>bale</b>	<b>0.809</b>
<b>Combined Natural Gas Combustion</b>	<b>None</b>	<b>MMcf<sup>1</sup></b>	<b>7.6</b>
Seed Handling <sup>2</sup>	Total Encl.	bale	0
Seed Loadout <sup>2</sup>	None	bale	0.0110
<b>Total Seed Handling and Loadout</b>	<b>Various</b>	<b>bale</b>	<b>0.0110</b>
Seed Cotton Receiving Haul Road <sup>2</sup>	Undoc. Water	bale	0.0167
Lint Bale Shipping Haul Road <sup>2</sup>	Undoc. Water	bale	0.00172
Seed Shipping Haul Road <sup>2</sup>	Undoc. Water	bale	0.00639
Trash Shipping Haul Road <sup>2</sup>	Undoc. Water	bale	0.00103
<b>Total Haul Roads</b>	<b>Undoc. Water</b>	<b>bale</b>	<b>0.0258</b>
<b>Total Fugitives</b>	<b>Various</b>	<b>bale</b>	<b>0.0368</b>

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Permit No.	022009-009C
Project No.	2019-08-054

**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 (3)(E). "Conditions required by permitting authority."*

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

3. Control Requirement – Fugitive Emissions
  - A. This condition of this permit supersedes Special Condition No. 3 found in previously issued Construction Permit No. 022009-009 issued by the Air Pollution Control Program.
  - B. Caruthersville Gin, Inc. shall control fugitive emissions by performing Best Management Practices. Best Management Practices include the following:
    - 1) Application of undocumented watering on all unpaved haul roads whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary,
    - 2) Closure of all doors to the seed house when loadout of materials is not occurring,
    - 3) Use of vinyl strip curtains on all natural draft openings to the seed house not equipped with doors,
    - 4) Documented watering of trash pile or water injection into trash auger, and
    - 5) Minimization of the trash pile footprint by frequent spreading or shipping.

