



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

OCT 23 2019

Mr. Jeff Lindsey
Manager
McCord Gin Co.
P.O. Box 5
Gideon, MO 63848

RE: New Source Review Permit Amendment/Correction - Permit Number: 052006-015A
Project Number: 2019-08-055; Installation Number: 143-0023

Dear Mr. Lindsey:

Your Construction Permit 052006-015 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 Whitlock 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 (PM₁₀) and particulate matter having an effective diameter less than or equal to two and one-half (2.5) microns or less (PM_{2.5}). 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 PM₁₀ and PM_{2.5} 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 052006-015 is being updated to:

1. include consideration of mote bale shipping, seed handling, seed shipping, and trash shipping emissions; and
2. make use of high efficiency cyclones on all ginning process exhausts enforceable.



Recycled paper

Your permit is revised by supersession of Special Condition 2 with the revised Special Condition 2 on the attached pages, addition of 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 PM₁₀ 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 PM₁₀ 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 PM₁₀/unit)</i>
Unloading	HE Cyclones	bale	0.185
First Stage Seed Cotton Cleaning	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
Total Ginning Process	HE Cyclones	bale	0.650
Combined Natural Gas Combustion	None	MMcf¹	7.6
Seed Handling ²	Total Encl.	bale	0
Seed Loadout ²	None	bale	0.0110
Total Seed Handling and Loadout	Various	bale	0.0110
Seed Cotton Receiving Haul Road ²	Undoc. Water	bale	0.00909
Lint Bale Shipping Haul Road ²	Undoc. Water	bale	0.00499
Seed Shipping Haul Road ²	Undoc. Water	bale	0.00669
Trash Shipping Haul Road ²	Undoc. Water	bale	0.00140
Total Haul Roads	Undoc. Water	bale	0.0222
Total Fugitives	Various	bale	0.0332

Mr. Lindsey

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Table 1: Compliance Emission Factor Components (continued)

1. MMcf relates to million cubic feet.

2. The seed handling emission factor in units of lbs PM₁₀/bale = (0.381 ton seed/bale) x (0.034 lb PM₁₀/ton seed). The seed loadout emission factor in units of lbs PM₁₀/bale = (0.381 ton seed/bale) x (0.029 lb PM₁₀/ton seed). The seed cotton receiving haul road emission factor in units of lbs PM₁₀/bale = [(0.693 ton seed cotton/bale) / (11 ton seed cotton / **0.175 VMT**)] x (0.824 lb PM₁₀/VMT). The lint bale shipping haul road emission factor in units of lbs PM₁₀/bale = [(0.243 ton lint/bale) / (22.5 ton lint / **0.492 VMT**)] x (0.939 lb PM₁₀/VMT). The seed shipping haul road emission factor in units of lbs PM₁₀/bale = [(0.381 ton seed/bale) / (22.5 ton seed / **0.421 VMT**)] x (0.939 lb PM₁₀/VMT). The trash shipping haul road emission factor in units of lbs PM₁₀/bale = [(0.0693 ton trash/bale) / (22.5 ton trash / **0.483 VMT**)] x (0.939 lb PM₁₀/VMT). Such calculations assume 35 percent by weight (% w/w) of seed cotton received is lint, 55 percent by weight (% w/w) is seed, and 10 percent by weight (% w/w) is trash. In addition, it is assumed one lint bale weighs 485 pounds.

*Trash handling is not included because the AP-42 drop point equation is not valid for the range of trash moisture content.

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, United States Post Office Building, 131 West High Street, Third Floor, 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 amendment/correction, please do not hesitate to contact Sitzes, Liberty, at the department's 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



Kendall B. Hale
Permits Section Chief

KBH:sla

Enclosures

c: Southeast Regional Office
PAMS File: 2019-08-055
Bob Cheever, R7

Page No.	
Permit No.	052006-015A
Project No.	2019-08-055

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."

McCord Gin Co.
New Madrid County, S13, T21N, R10E

2. Control Device Requirement – High Efficiency Cyclones

- A. This condition of this permit supersedes Special Condition 2 found in previously issued Construction Permit No. 052006-015 issued by the Air Pollution Control Program.
- B. McCord Gin Co. shall use high efficiency cyclones (1D3D with 1D3D or 2D2D inlets, or 2D2D) to control emissions from all cotton ginning process equipment exhausts at this installation. The high efficiency cyclones must be in use at all times when this plant is in operation and shall be operated and maintained in accordance with the manufacturer's specifications.
- C. McCord Gin Co. shall maintain an operating and maintenance log for the high efficiency cyclones that shall include the following:
 - 1) Incidents of malfunction: with impact on emissions, duration of event, probable cause and corrective actions.
 - 2) Maintenance activities: with inspection schedule, repair actions and replacements, etc.

3. McCord Gin Co. shall control fugitive emissions by performing Best Management Practices. Best Management Practices include the following:

- A. 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,
- B. Closure of any and all top access doors/panels to the drive-under seed loadout hopper(s) when loadout of materials is not occurring,
- C. Documented watering of trash pile or water injection into trash auger, and
- D. Minimization of the trash pile footprint by frequent spreading or shipping.

Attachment A – Rolling Consecutive 12-Month PM₁₀ Emissions Compliance Worksheet

McCord Gin Co.
 New Madrid County, S13, T21N, R10E
 Project Number: 2019-08-055
 Installation ID Number: 143-0023
 Permit Number: 052006-015A

This sheet covers the period from _____ to _____.
 (month, year) (month, year)

Description	Monthly Usage	PM ₁₀ Emission Factor	Monthly PM ₁₀ Emissions (tons)
Ginning Process (all ginstands)	Bales	0.650 lb/bale	
Dryer Heaters – Natural Gas	MMcf	7.6 lb/MMcf	
Fugitives (all ginstands)	Bales	0.0332 lb/bale	
Start-up, Shutdown, and Malfunction Emissions from all Emission Units			
Installation-Wide PM₁₀ Emissions (tons):			

Monthly PM₁₀ Emissions (tons/month) = Monthly Usage x PM₁₀ Emission Factor x 0.0005 tons/lb
 Installation-Wide PM₁₀ Emissions (tons/month) = The sum of the PM₁₀ Emissions from all emission units (tons/month) and the Start-up, Shut-down, and Malfunction emissions for the current month.
 Rolling Consecutive 12-Month PM₁₀ Emissions (tons/yr) = The sum of the last 12 months Installation-Wide PM₁₀ Emissions (tons/month)

Month/Year	Rolling Consecutive 12-Month PM ₁₀ Emissions ¹ (tons/yr)

Month/Year	Rolling Consecutive 12-Month PM ₁₀ Emissions ¹ (tons/yr)

1. Rolling Consecutive 12-Month PM₁₀ Emissions of less than **32.7 tons/yr** demonstrates compliance.