



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

OCT 23 2019

Mr. Gregg Sain
Manager
Graves Kennett Gin Inc.-White Oak
P.O. Box 885
Kennett, MO 63857

RE: New Source Review Permit Amendment/Correction - Permit Number: 042006-009A
Project Number: 2019-08-027; Installation Number: 069-0010

Dear Mr. Sain:

Your Construction Permit 042006-009 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's 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 (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 042006-009 is being updated to include consideration of mote bale shipping, seed handling, seed shipping, and trash shipping emissions.



Recycled paper

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Your permit is revised by addition of Special Condition 4 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
Cyclone Robber	HE Cyclones	bale	0.0135
Mote Fan	HE Cyclones	bale	0.0200
Mote Trash Fan	HE Cyclones	bale	0.00931
Battery Condenser	HE Cyclones	bale	0.0171
Total Ginning Process	HE Cyclones	bale	0.673
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	None	bale	0.0197
Lint Bale Shipping Haul Road ²	None	bale	0.00413
Seed Shipping Haul Road ²	None	bale	0.00633
Trash Shipping Haul Road ²	None	bale	0.00186
Total Haul Roads	None	bale	0.0320
Total Fugitives	Various	bale	0.0430

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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 / **0.189 VMT**)] x (1.65 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 / **0.204 VMT**)] x (1.88 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 / **0.199 VMT**)] x (1.88 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 / **0.322 VMT**)] x (1.88 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.ao.mo.gov/ahc.

If you have any questions regarding this amendment/correction, please do not hesitate to contact Liberty Sitzes, 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: 2019-08-027
Bob Cheever, R7

Page No.	
Permit No.	042006-009A
Project No.	2019-08-027

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

Graves Kennett Gin Inc.-White Oak
Dunklin County, S31, T20N, R10E

4. Graves Kennett Gin Inc.-White Oak shall control fugitive emissions by performing Best Management Practices. Best Management Practices include the following:
 - A. Closure of all doors to the seed loadout structure when loadout of materials is not occurring,
 - B. Use of vinyl strip curtains on all natural draft openings to the seed loadout structure not equipped with doors,
 - 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.

