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: 112006-008  Project Number: 2006-08-049
Owner: MFA Incorporated
Owner's Address: 201 Ray Young Drive, Columbia, MO 65201
Installation Name: MFA Retail Bulk Plant - Lockwood
Installation Address: S. Park St., Lockwood, MO 65682
Location Information: Dade County, S36, T31N, R28W

Application for Authority to Construct was made for:

The addition of an enclosed vertical blender and load out conveyor for the production of fertilizer at MFA Incorporated's Lockwood Retail Bulk Plant. 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 (listed as attachments starting on page 2) are applicable to this permit.

NOV 13 2006
EFFECTIVE DATE

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

MO 780-1204 (1-03)
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. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the 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 as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, 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 Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

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 Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.
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.”

MFA Retail Bulk Plant - Lockwood
Dade County, S36, T31N, R28W

1. Emission Limitation
   A. MFA Retail Bulk Plant - Lockwood shall emit less than 15 tons of particulate matter less than ten (10) microns in diameter (PM10) in any consecutive 12 month period from the entire installation.

   B. MFA Retail Bulk Plant - Lockwood shall maintain an accurate record of PM10 emitted into the atmosphere from the entire installation. Attachment A or an equivalent form shall be used for this purpose. MFA Retail Bulk Plant - Lockwood 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. MFA Retail Bulk Plant - Lockwood shall report to the Air Pollution Control Program’s Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which an exceedance occurs.

2. MFA Retail Bulk Plant – Lockwood shall enclose the following emission units:
   A. EP–1C Overhead Auger
   B. EP–2 Storage Bays
   C. EP–2A Bucket Loader
   D. EP–5 Vertical Mixer/Weigh Hopper
   E. EP–6 Mixer
REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW
Project Number: 2006-08-049
Installation ID Number: 057-0005
Permit Number:

MFA Retail Bulk Plant - Lockwood Complete: 8/14/06
S. Park St. Reviewed: 9/25/06
Lockwood, MO 65682

Parent Company:
MFA Incorporated
201 Ray Young Drive
Columbia, MO 65201

Dade County, S36, T31N, R28W

REVIEW SUMMARY

• MFA Retail Bulk Plant - Lockwood has applied for authority to construct a vertical blender and load out conveyor to increase production.

• Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.

• No air pollution control equipment is being used in association with the new equipment.

• This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of PM$_{10}$ are limited to less than de minimis levels.

• This installation is located in Dade 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 conditioned potential emissions of the application are limited to less than de minimis levels.

• Emissions testing is not required for the equipment.

• No Operating Permit is required for this installation.

• Approval of this permit is recommended with special conditions.
INSTALLATION DESCRIPTION

MFA Incorporated’s Retail Bulk Plant in Lockwood, Missouri mixes and distributes bulk fertilizer. This facility is a de minimis source under 10 CSR 10-6.060 section (5) Construction Permits Required. The facility currently holds a Basic Operating Permit. A Basic Operating Permit will no longer be required since this permit limits the emissions from this installation to de minimis levels. The fertilizer blended is composed of ammonium nitrate, potassium, diammonium phosphate, urea, sul-po-mag, and triple superphosphate. Fertilizer is received and conveyed to a bucket elevator, which discharges to an overhead screw conveyor that in turn discharges to individual storage bays. From the storage piles, fertilizer is transferred to a weigh hopper and mixer via bucket loader. Once the fertilizer is mixed, it is transferred to trucks via conveyor. The following construction permits have been issued to MFA Retail Bulk Plant - Lockwood from the Air Pollution Control Program.

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0392-010</td>
<td>New Fertilizer Plant</td>
</tr>
</tbody>
</table>

PROJECT DESCRIPTION

An enclosed vertical mixer with a maximum hourly design rate (MHDR) of 90 tons per hour (tph) and a load-out conveyor with a MHDR of 90 tph will be added to increase the plants production. The existing plant was bottlenecked by the mixer, which has a MHDR of 45 tons per hour. These new units will be installed in parallel with the existing weigh hopper and mixer to eliminate this bottleneck. A bottleneck in the fertilizer receiving process limits the MHDR of the overall mixing process to 60 tph. The bottleneck has been accounted for in the emissions calculations and if removed, a new construction permit will be required. A 3.7% control factor has been applied to all enclosed processes. The applicant proposed a de minimis limit for PM$_{10}$ emissions, which will apply to the entire installation.

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 8.3 Ammonium Nitrate. Because no emission factors exist for the fertilizer industry, emission calculations were based on an emission factor for ammonium nitrate handling. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year.) The following table provides an emissions summary for this project.

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>PM$_{10}$</td>
<td>15.0</td>
<td>34.69</td>
<td>0.3908</td>
<td>18.25</td>
<td>&lt; 15</td>
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<tr>
<td>SOx</td>
<td>40.0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>NOx</td>
<td>40.0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>VOC</td>
<td>40.0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>CO</td>
<td>100.0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>HAPs</td>
<td>10.0/25.0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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</table>

N/A = Not Applicable; N/D = Not Determined **Conditioned Potential based on voluntary de minimis limit.
PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Conditioned potential emissions of PM$_{10}$ are below de minimis levels.

APPLICABLE REQUIREMENTS

MFA Retail Bulk Plant - Lockwood 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 April 1 for the previous year's emissions.

- 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
STAFF RECOMMENDATION

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

Michael Mittermeyer  
Environmental Engineer

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated August 11, 2006, received August 14, 2006, designating MFA Incorporated as the owner and operator of the installation.


- Southwest Regional Office Site Survey, dated 8/29/06.
Attachment A: Monthly $PM_{10}$ Emissions Tracking Record
MFA Retail Bulk Plant - Lockwood

Project Number: 2006-08-049
County, CSTR: Dade County (S36, T31N, R28W)

This sheet covers the period from ______________ to ______________ (Month, Day, Year)
(Copy this sheet as needed.)

<table>
<thead>
<tr>
<th>Month</th>
<th>Monthly Production (tons)</th>
<th>Composite $PM_{10}$ Emission Factor (lbs/ton)</th>
<th>Monthly $PM_{10}$ Emissions (lbs)</th>
<th>Monthly $PM_{10}$ Emissions (tons)</th>
<th>12-Month $PM_{10}$ Emissions (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
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<td>2,498</td>
<td>1.249</td>
<td>14.98</td>
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Note 1: The Monthly Emissions (lbs.) are calculated by multiplying the Monthly Production (tons) by the Composite Emission Factor (lbs/ton).

Note 2: The Monthly Emissions (tons) are calculated by dividing the Monthly Emissions (lbs.) by 2,000.

Note 3: The 12-Month Emissions (tons/year) are a rolling total calculated by adding the Month’s Emissions (tons) to the Monthly Emissions (tons) of the previous eleven (11) months. A total of less than 15 tons in any consecutive 12-month period indicates compliance.
Mr. Alan Mahoney  
SER Manager  
MFA Incorporated  
201 Ray Young Dr.  
Columbia, MO 65201  

RE: New Source Review Permit - Project Number: 2006-08-049  

Dear Mr. Mahoney:  

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, 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 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 me at (573) 751-4817, or you may write to me at the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102. Thank you for your attention to this matter.  

Sincerely,  

AIR POLLUTION CONTROL PROGRAM  

Kendall B. Hale  
New Source Review Unit Chief  

KBH:mml  

Enclosures  

c: Southwest Regional Office  
PAMS File: 2006-08-049  
Permit Number: