

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: **092010-005** Project Number: 2010-07-004
Parent Company: ADM Grain
Parent Company Address: 4666 Faries Parkway, Decatur, IL 62525
Installation Name: ADM - Dudley
Installation Number: 207-0056
Installation Address: 7466 South Old Hwy 60, Dudley, MO 63936
Location Information: Stoddard County, T25N, S25, R8E

Application for Authority to Construct was made for:
A grain storage pile. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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- Standard Conditions (on reverse) are applicable to this permit.
 - Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

SEP 13 2010

EFFECTIVE DATE

A handwritten signature in black ink, appearing to read "James L. Kavanaugh".

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 within 30 days of actual startup. 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.	2010-07-004

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."

ADM - Dudley
Stoddard County, T25N, S25, R8E

1. Emission Limitation
 - A. ADM - Dudley shall emit less than 15.0 tons of particulate matter less than ten microns in diameter (PM₁₀) in any consecutive 12-month period from the emission points listed in Table 2.
 - B. Attachment A or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 1.A.
2. Haul Road Watering
ADM - Dudley shall water haul roads whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary.
3. Equipment Limitation
The grain storage pile shall be filled and emptied exclusively with portable equipment. Grain shall not be processed through the dryer (EP-03) or elevator legs (EP-02).
4. Record Keeping and Reporting Requirements
 - A. ADM - Dudley 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.
 - B. ADM - Dudley shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW

Project Number: 2010-07-004
Installation ID Number: 207-0056
Permit Number:

ADM - Dudley
7466 South Old Hwy 60
Dudley, MO 63936

Complete: July 2, 2010

Parent Company:
ADM Grain
4666 Faries Parkway
Decatur, IL 62525

Stoddard County, T25N, S25, R8E

REVIEW SUMMARY

- ADM - Dudley has applied for authority to construct a grain storage pile.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the installation. NSPS Subpart DD *Standards of Performance for Grain Elevators* does not apply to the installation.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation. None of the currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- Undocumented watering is being used to control the particulate matter emissions from the unpaved haul roads in this permit.
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of PM₁₀ are conditioned below the de minimis level. Potential emissions of particulate matter (PM) and particulate matter less than 2.5 microns in aerodynamic diameter (PM_{2.5}) are proportionately reduced to minor source levels and de minimis levels, respectively.
- This installation is located in Stoddard County, an attainment area for all criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and

fugitive emissions are not counted toward major source applicability.

- Ambient air quality modeling was not performed since potential emissions of PM₁₀ and PM_{2.5} are conditioned below de minimis levels. Potential emissions of PM are not used to determine modeling applicability.
- Emissions testing is not required for the equipment.
- A modification to the basic operating permit is required for this installation.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Archer Daniels Midland Grain Company – Dudley referred to as ADM – Dudley is an existing grain elevator in Dudley, Missouri. The installation is a minor source under construction permits and a basic source under operating permits.

The following permits have been issued to ADM - Dudley from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
EX199805491	Basic operating permit
0799-006	Construction permit for dryer replacement and new receiving pit
AP200301044	Basic operating permit
AP200707034	Basic operating permit

PROJECT DESCRIPTION

ADM – Dudley proposes to install a grain storage pile consisting of the equipment and processes listed in Table 2.

Table 2: Project Description

Designation	Description	Maximum Hourly Design Rate (tons)	Bottlenecked Maximum Hourly Design Rate (tons)
EU-07	Hopper bottom truck receiving		
EU-08	Portable stacker		
EU-09	Truck shipping		
EU-10	Unpaved receiving haul road		
EU-11	Unpaved shipping haul road		

The maximum hourly design rate (MHDR) is bottlenecked on an annual basis by the stacker conveyor that fills the pile. Since the pile is not limited exclusively to corn, the bushel weight of 60 pounds was conservatively used in emissions calculations.

According to ADM – Dudley, grain will be received primarily from hopper bottom semi

trucks into portable receiving pits. Portable conveyors or augers will fill a grain pile constructed from perforated steel sidewalls. The sidewalls are segmented and will be linked to each other at the site and staked to the ground. The floor of the structure will be soil prepared with lime. Once filled, the pile will be covered with a tarp. The pile will be emptied using portable equipment including a combination of front-end loaders and tractor mounted augers. Grain stored in the pile will not be processed through existing equipment at the site. Using this information EPA has determined the pile does not qualify as permanent storage as defined in NSPS Subpart DD *Standards of Performance for Grain Elevators*.

EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis for grain operations were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, *Grain Elevators and Processes* May 2003. Emission factors include those for hopper bottom receiving, storage pile load-in as a bin vent, and truck shipping. Each of these processes is uncontrolled.

Haul road emissions were calculated using AP-42 Section 13.2.2 *Unpaved Roads* November 2006. Fifty percent control of all particulate matter for the use of undocumented watering was incorporated into haul road calculations.

Existing potential emissions are cited from permit 0799-006, with net potential emissions for SO_x, NO_x, VOC, and CO from the replacement of the dryer under that permit. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8,760 hours per year). The following table provides an emissions summary for this project.

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (2009 EIQ)	Conditioned Potential Emissions of the Application	New Installation Potential Emissions
PM ₁₀	15.0	206.5	2.13	<15.0	211.5
PM	25.0	N/D	N/D	51.41	N/D
PM _{2.5}	10.0	N/D	N/D	2.22	N/D
SO _x	40.0	0.1	1.0E-04	N/A	0.1
NO _x	40.0	25.0	0.12	N/A	25.0
VOC	40.0	0.7	3.0E-03	N/A	0.7
CO	100.0	5.0	0.02	N/A	5.0
HAPs	10.0/25.0	N/D	N/D	N/A	N/D

N/A = Not Applicable; N/D = Not Determined

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ are conditioned below the de minimis level. Potential emissions of particulate matter (PM) and particulate matter less than 2.5 microns in aerodynamic diameter (PM_{2.5}) are proportionately reduced to minor source levels and de minimis levels, respectively.

APPLICABLE REQUIREMENTS

ADM - Dudley 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. For a complete list of applicable requirements for your installation, please consult your operating permit.

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

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), 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 June 28, 2010, received July 2, 2010, designating ADM Grain 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 July 14, 2010.

