

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: 102014-006

Project Number: 2014-07-029
Installation Number: 061-0026

Parent Company: Murphy-Brown of Missouri, LLC

Parent Company Address: 17999 US Highway 65, Princeton, MO 64673

Installation Name: Murphy-Brown of Missouri Coffey Feed Mill

Installation Address: 18115 State Highway B, Coffey, MO 64636

Location Information: Daviess County, S4, T61N, R28W

Application for Authority to Construct was made for:

The construction of a new plastic bag grain storage operation, a new corn dryer, a new grain dump site, and two new grain storage bins. 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 are applicable to this permit.

OCT - 7 2014

EFFECTIVE DATE


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 Department's Air Pollution Control Program of the anticipated date of startup of these air contaminant sources. 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 startup of these air contaminant sources.

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 sources(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.

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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."

Murphy-Brown of Missouri Coffey Feed Mill
 Daviess County, S4, T61N, R28W

1. Superseding Condition
 - A. Special Condition 2 of this permit supersedes Special Condition 4 found in the previous construction permit (1194-008) issued by the Air Pollution Control Program.

2. Operational Limitation
 - A. The annual throughput of grain for the entire facility shall not exceed three hundred sixty thousand (360,000) tons. This includes all emission points listed in the previous construction permit (1194-008) plus the grain receiving/ handling, grain dryer, (2) storage bins, and grain bagging operations named in this project.

 - B. The grain dryer shall not operate in excess of one thousand (1,000) hours per year. Murphy-Brown of Missouri shall show compliance with this condition by the use of a non-resettable meter or other acceptable form of monitoring device.

 - C. Attachment A and B or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 2A and 2B, respectively.

3. Control Device Requirement - Baghouse
 - A. Murphy-Brown of Missouri shall control emissions from the receiving pit, conveyors, and elevators using a baghouse, as specified in the permit application.

 - B. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that Department of Natural Resources' employees may easily observe them.

 - C. Replacement filters for the baghouse shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- D. Murphy-Brown of Missouri shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours of baghouse operating time. The operating pressure drop shall be maintained within the design conditions, as per the manufacturer's specifications.
 - E. Murphy-Brown of Missouri shall maintain a copy of the baghouse manufacturer's specifications on site.
 - F. Murphy-Brown of Missouri shall maintain an operating and maintenance log for the baghouse which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
4. Record Keeping and Reporting Requirements
- A. Murphy-Brown of Missouri shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
 - B. Murphy-Brown of Missouri shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2014-07-029
Installation ID Number: 061-0026
Permit Number:

Murphy-Brown of Missouri Coffey Feed Mill
18115 State Highway B
Coffey, MO 64636

Complete: July 21, 2014

Parent Company:
Murphy-Brown of Missouri, LLC
17999 US Highway 65
Princeton, MO 64673
Daviness County, S4, T61N, R28W

REVIEW SUMMARY

- Murphy-Brown of Missouri has applied for authority to construct a new plastic bag grain storage operation, a new corn dryer, a new grain dump site, and two new grain storage bins.
- HAP emissions are expected from the proposed equipment. The only HAPs emitted will be insignificant levels of combustion products from the dryer.
- None of the New Source Performance Standards (NSPS) apply to the project.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- A baghouse is being used to control particulate emissions from the receiving pit, conveyors, and elevators, as specified in the permit application.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are conditioned below de minimis levels.
- This installation is located in Daviness 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.
- Emissions testing is not required for the equipment.
- A Basic Operating Permit is required for this installation.

- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

The Murphy-Brown of Missouri Coffey Feed Mill is a grain-based feed producing operation located in Daviess County, on the Cypress Creek site. The feed mill imports grain and processes it, along with other ingredients, into pellets which are used as animal feed. The installation is a minor source of emissions for construction permitting and requires a basic operating permit

The following New Source Review permits have been issued to Murphy-Brown of Missouri Coffey Feed Mill from the Air Pollution Control Program:

Table 1: Permit History

Permit Number	Date	Description
1194-008	10/10/1994	Construction of a grain-based feeding operation
Applicability Determination	08/06/2001	Bio-Lysine system
No Permit Required	05/13/2013	Hammermill upgrade

PROJECT DESCRIPTION

Murphy-Brown of Missouri has requested to modify their existing Coffey Feed Mill. A new plastic bag grain handling operation is to be incorporated, whose emissions will be controlled by a baghouse. A new column grain dryer is to be installed on a new process line, which will feed into two new storage bins. The old grain dump site will be decommissioned and replaced by a new site of the same capacity. Murphy-Brown of Missouri does not request any additional throughput, and so will adhere to the voluntary annual throughput limit of 360,000 tons for the facility, as established in the previous permit (1194-008). An operational limit of 1,000 hr/yr for the grain dryer has been requested.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 9.9.1 *Grain Elevators and Processes*, May 2003. PTE for feed processes were calculated using emission factors for grain handling, drying, storage, and bagging (classified as shipping). The control efficiency for the baghouse was taken to be 99.0% for PM, PM₁₀, and PM_{2.5}.

The following table provides an emissions summary for this project. Existing potential emissions were taken from the previous construction permit for this facility (1194-008). Existing actual emissions were taken from the installation's 2013 EIQ. Potential emissions of the application represent the potential emissions of the new equipment, assuming continuous operation (8,760 hours per year) at the maximum throughput. Limited potential emissions of the application were calculated by taking into consideration control equipment and applicable special conditions.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2013 EIQ)	Potential Emissions of the Application	Limited Potential of the Application
PM	25.0	N/D	N/D	211.96	22.26
PM ₁₀	15.0	36.84	6.43	76.73	7.70
PM _{2.5}	10.0	N/D	0.11	14.26	2.48
SO _x	40.0	0.011	0.01	0.12	0.01
NO _x	40.0	10.01	1.42	19.95	2.28
VOC	40.0	0.04	0.08	1.10	0.13
CO	100.0	0.73	1.20	16.76	1.91
HAPs	10.0/25.0	0.00	0.00	0.38	0.04

N/D = Not Determined

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Murphy-Brown of Missouri Coffey Feed Mill 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
- *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 10-6.165

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.

Ryan Schott
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated July 11, 2014, received July 14, 2014, designating Murphy-Brown of Missouri, LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

APPENDIX A

Abbreviations and Acronyms

%percent	m/s meters per second
°Fdegrees Fahrenheit	Mgal 1,000 gallons
acfmactual cubic feet per minute	MW megawatt
BACT Best Available Control Technology	MHDR maximum hourly design rate
BMPs Best Management Practices	MMBtu Million British thermal units
Btu British thermal unit	MMCF million cubic feet
CAM Compliance Assurance Monitoring	MSDS Material Safety Data Sheet
CAS Chemical Abstracts Service	NAAQS ... National Ambient Air Quality Standards
CEMS Continuous Emission Monitor System	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CFR Code of Federal Regulations	NO_x nitrogen oxides
CO carbon monoxide	NSPS New Source Performance Standards
CO₂ carbon dioxide	NSR New Source Review
CO_{2e} carbon dioxide equivalent	PM particulate matter
COMS Continuous Opacity Monitoring System	PM_{2.5} particulate matter less than 2.5 microns in aerodynamic diameter
CSR Code of State Regulations	PM₁₀ particulate matter less than 10 microns in aerodynamic diameter
dscf dry standard cubic feet	ppm parts per million
EQ Emission Inventory Questionnaire	PSD Prevention of Significant Deterioration
EP Emission Point	PTE potential to emit
EPA Environmental Protection Agency	RACT Reasonable Available Control Technology
EU Emission Unit	RAL Risk Assessment Level
fps feet per second	SCC Source Classification Code
ft feet	scfm standard cubic feet per minute
GACT Generally Available Control Technology	SIC Standard Industrial Classification
GHG Greenhouse Gas	SIP State Implementation Plan
gpm gallons per minute	SMAL Screening Model Action Levels
gr grains	SO_x sulfur oxides
GWP Global Warming Potential	SO₂ sulfur dioxide
HAP Hazardous Air Pollutant	tph tons per hour
hr hour	tpy tons per year
hp horsepower	VMT vehicle miles traveled
lb pound	VOC Volatile Organic Compound
lbs/hr pounds per hour	
MACT Maximum Achievable Control Technology	
µg/m³micrograms per cubic meter	

Mr. Brian Paulsen
Director of Environmental, Health, and Safety
Murphy-Brown of Missouri Coffey Feed Mill
17999 US Highway 65
Princeton, MO 64673

RE: New Source Review Permit - Project Number: 2014-07-029

Dear Mr. Paulsen:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions 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 Ryan Schott, at the Department of Natural Resources' 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

Susan Heckenkamp
New Source Review Unit Chief

SH:rs1

Enclosures

c: Kansas City Regional Office
PAMS File: 2014-07-029

Permit Number: