



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: 062020-002 Project Number: 2020-02-033
Installation Number: 155-0063

Parent Company: Bunge North America

Parent Company Address: 1391 Timberlake Manor Parkway, St. Louis, MO 63017

Installation Name: Bunge North America, Inc.

Installation Address: 100 Ward Ave., Caruthersville, MO 63830

Location Information: Pemiscot County, S16, T18N, 13E

Application for Authority to Construct was made for:
Removal of baghouse, CD-3, that controls EP-1 (Truck Receiving – Old House Pit #1).
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.



Director or Designee
Department of Natural Resources

June 2, 2020

Effective Date

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 Enforcement and Compliance Section of 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 Enforcement and Compliance Section of the Department's 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's 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 the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's 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 using the contact information below.

Contact Information:
Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:
<http://dnr.mo.gov/regions/>

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 to 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."

Bunge North America, Inc.
Pemiscot County, S16, T18N, 13E

1. **Superseding Condition**
The conditions of this permit supersede Special Conditions 3 and 4 found in the previously issued construction permit 092014-003 issued by the Air Pollution Control Program.
2. **PM Emission Limitation**
 - A. Bunge North America shall emit less than 250.0 tons of PM in any consecutive 12-month period from the entire installation as shown in Table 1.

Table 1: Bunge North America-Caruthersville

Emission Point	Description
EP-1	Truck Receiving (old house pit #1)
EP-2	Truck Receiving (new house pit)
EP-3*	Grain Handling
EP-6	Grain Dryer
EP-7	Grain Loading (barge)
EP-8	Grain Loading (truck)
EP-9	Haul Roads
EP-10	Storage Bins (old house)
EP-11	Storage Bins (new house)
EP-12	Truck Receiving (pit #2)
EP-15	Dust Tank

*Emission points EP-4 and EP-5 previously represented grain handling in separate areas of the installation. EP-3 of this project includes all handling at the installation.

- 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 2.A.

SPECIAL CONDITIONS:

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

3. Control Device Requirement - Baghouses
 - A. Bunge North America, Inc. shall control emissions from the equipment listed below using baghouses as specified by the applicant.
 - 1) Truck Receiving (new house pit) (EP-2)
 - 2) The following Internal Handling emission points (EP-3)
 - a) New house basement reclaim
 - b) New house receiving leg
 - c) Old house receiving drag
 - d) Old house leg #1
 - e) Old house leg #2
 - f) Old house leg #3
 - g) Old house gallery drag
 - h) Old house reverse drag
 - i) New wet leg
 - j) Dust tank
 - B. The baghouses 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 the Department of Natural Resources' employees may easily observe them.
 - C. Replacement filters for the baghouses 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).
 - D. Bunge North America, Inc. shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours while the facility is in operation. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty. On days the facility is not operating Bunge North America, Inc. shall note this on the records accordingly.
 - E. Bunge North America, Inc. shall maintain a copy of the baghouse manufacturer's performance warranty on site.
 - F. Bunge North America, Inc. shall maintain an operating and maintenance log for the baghouses 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.

SPECIAL CONDITIONS:

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

4. Record Keeping and Reporting Requirements
 - A. Bunge North America, Inc. 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. Bunge North America, Inc. shall report to the Air Pollution Control Program's Compliance/Enforcement Section, by mail at P.O. Box 176, Jefferson City, MO 65102 or by email at AirComplianceReporting@dnr.mo.gov, no later than 10 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 (5) REVIEW

Project Number: 2020-02-033
Installation ID Number: 155-0063
Permit Number: 062020-002

Installation Address:

Bunge North America, Inc.
100 Ward Ave.
Caruthersville, MO 63830

Parent Company:

Bunge North America
1391 Timberlake Manor Parkway
St. Louis, MO 63017

Pemiscot County, S16, T18N, 13E

REVIEW SUMMARY

- Bunge North America, Inc. has applied for authority to remove baghouse, CD-3, that controls EP-1 (Truck Receiving – Old House Pit #1).
- The application was deemed complete on February 11, 2020.
- HAP emissions are not expected from the proposed project.
- None of the New Source Performance Standards (NSPS) apply to the installation. *Standards of Performance for Grain Elevators*, 40 CFR Part 60, Subpart DD does not apply to this facility because the total grain storage capacity is less than 2.5 million bushels.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- No air pollution control equipment is being used in association with this project. An updated list of equipment being controlled by baghouses is shown in Special Condition 3 of this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ are below de minimis levels but greater than the insignificant PM₁₀ threshold.
- This installation is located in Pemiscot County, an attainment/unclassifiable 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 the application are below de minimis levels.
- Emissions testing is not required for the equipment as a part of this permit.
- An application for an amendment to the current Intermediate Operating Permit is required for this installation within 180 days of commencement of operations.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Bunge North America, Inc. operates a grain elevator located in Caruthersville, Missouri (Pemiscot County) that has a storage capacity of 2.45 million bushels of grain. The installation receives grain by truck and ships grain by barge and truck. In 2001, a construction permit for the addition of a natural gas burner for drying rice was issued for the existing grain dryer. The grain dryer associated with permit number 082001-004 was replaced in 2013 by a larger grain dryer associated with project number 2013-02-007. This facility currently operates under an intermediate operating permit. Potential emissions of PM were not calculated for this installation prior to project number 2013-02-007. During the review of project number 2013-02-007 it was determined that existing non-fugitive PM emissions are above the major source level. Therefore, Bunge North America, Inc. has taken an installation wide 250.0 ton per year PM limit to ensure they are considered a minor source for PM and to avoid PSD review for project number 2014-04-029. This installation is considered a synthetic minor source for construction permitting purposes.

Bunge North America, Inc. installed a new grain dryer that is capable of drying up to 10,000 bushels of grain per hour or 300 tons of grain per hour as part of project number 2013-02-007. The grain dryer is fueled by natural gas and has a maximum heat input capacity equal to 56 MMBtu/hr.

As a part of the project number 2014-04-029, Bunge North America, Inc. installed two new drag conveyors and a grain elevator that feeds into the grain dryer. The equipment is rated at 11,000 bushels of grain per hour or 330 tons of grain per hour. However, the dryer, which is rated at 300 tons of grain per hour, served as a bottleneck for the process. The new elevator was to be enclosed and routed to a baghouse to control particulate matter. In addition to the conveyors and grain elevator, Bunge North America, Inc. replaced the existing dust tank that receives dust from CD-3 and CD-4, which are both baghouses, with a new dust tank with the same capacity. Bunge North America, Inc. also replaced two existing cyclones (each have an airflow rated at 500 cfm) that feed into the dust tank with one bin vent filter with an airflow equal to 950 cfm.

In permit number 072013-008, Bunge North America Inc. was required to apply dust suppressant to all grain handled by this installation. However, Bunge North America Inc. has requested that this condition be removed as part of project number 2014-04-029.

The following NSR permits have been issued to Bunge North America, Inc. from the Air Pollution Control Program.

Table 2: NSR Permit History

Permit Number	Description
082001-004	Additional Grain Dryer Burner
012006-016	Additional Storage, Receiving Pit, and Grain Handling
072013-008	New Grain Dryer
092014-003	Installation of two drag conveyors, an elevator leg, a baghouse, and removal of dust suppression requirement

PROJECT DESCRIPTION

Bunge North America, Inc. has proposed to remove baghouse, CD-3, which controls EP-1 (Truck Receiving – Old House Pit #1). This receiving pit will be used much less than the two newer receiving pits. However, the PTE emissions at EP-1 were calculated as if the receiving pit were operating at its maximum hourly design rate (MHDR). The installation should be using the receiving pit less but it still has the potential to be used at its MHDR of 380 tons of grain per hour. Thus the removal of CD-3 will cause an increase in PM, PM₁₀, and PM_{2.5} emissions causing a need for a permit. This project also removes the baghouse, CD-3, from the baghouse special condition and also updates the tracking sheet for the 250 tpy PM installation wide limit. No modeling done at this installation has included this baghouse (CD-3) being removed. There also have been no 15 tpy PM₁₀ or 10 tpy PM_{2.5} limits at this installation that included EP-1.

EMISSIONS/CONTROLS EVALUATION

The emission factors 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. The emission factor for the post baghouse removal calculation was obtained from adding 75% of the grain receiving by hopper truck emission factor with 25% of the grain receiving by straight truck emission factor. Bunge North America, Inc. claims that EP-1 should only be receiving by hopper truck, to avoid record keeping, the PTE calculations factor 25% of receiving by straight trucks.

Table 3 provides an emissions summary for this project. Existing potential emissions were taken from the previous permit, project number 2014-04-029. Existing actual emissions were taken from the installation's 2019 EIQ. Potential emissions of the project represent the potential of the old house receiving pit #1 (EP-1) without being controlled by baghouse CD-3, assuming continuous operation (8760 hours per year). New installation conditioned potential accounts for the facility wide 250.0 ton per year PM emission limit with the potential PM emission increase from this project.

Table 3: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2019 EIQ)	Potential Emissions of the Project	New Installation Conditioned Potential ¹
PM	25.0	2206.75	3.32	28.68	<250.00
PM ₁₀	15.0	650.37	3.32	6.35	73.44
PM _{2.5}	10.0	98.79	0.43	1.06	11.17
SO _x	40.0	0.14	0.0002	N/A	N/A
NO _x	40.0	24.05	0.038	N/A	N/A
VOC	40.0	1.32	0.002	N/A	N/A
CO	100.0	20.20	0.032	N/A	N/A
HAPs	10.0/25.0	0.45	0.00	N/A	N/A

N/A = Not Applicable

¹ New installation conditioned potential includes a 250.0 ton per year PM emission limit to ensure this installation is a minor source for PM and to avoid PSD review for this project. The PM₁₀ and PM_{2.5} potential emissions were proportionally reduced.

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 PM₁₀ are below de minimis levels but greater than the insignificant PM₁₀ threshold.

APPLICABLE REQUIREMENTS

Bunge North America, Inc. 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

- *Operating Permits*, 10 CSR 10-6.065
- *Start-Up, Shutdown, and Malfunction Conditions*, 10 CSR 10-6.050

- *Submission of Emission Data, Emission Fees and Process Information, 10 CSR 10-6.110*
 - Per 10 CSR 10-6.110(4)(B)2.B(II) and (4)(B)2.C(II) a full EIQ is required for the first full calendar year the equipment (or modifications) approved by this permit are in operation.
- *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*

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes, 10 CSR 10-6.400* applies but the installation is inherently compliant.
- *Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating, 10 CSR 10-6.405*

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*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated February 7, 2020, received February 11, 2020, designating Bunge North America as the owner and operator of the installation.

Attachment A – Installation Wide PM Compliance Worksheet

Bunge North America, Inc.
 Pemiscot County, S16, T18N, R13E
 Project Number: 2020-02-033
 Installation ID Number: 155-0063
 Permit Number: 062020-002

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

(a)	(b)		(c)	(d)	(e)	(f)	(g)
Month, Year	Grain Handled (tons)		Emission Factor	Monthly Emissions (tons)	Monthly Emissions from Previous Year (tons)	Previous 12 Month Emission Total (tons)	Current 12 Month Emission Total (tons)
<i>EX: 10/2019</i>	<i>Grain Received</i>	<i>100,000</i>	<i>0.356</i>	<i>28.8</i>	<i>24.0</i>	<i>160.0</i>	<i>164.8</i>
	<i>Grain Dried</i>	<i>100,000</i>	<i>0.220</i>				
	Grain Received		0.356				
	Grain Dried		0.220				
	Grain Received		0.356				
	Grain Dried		0.220				
	Grain Received		0.356				
	Grain Dried		0.220				
	Grain Received		0.356				
	Grain Dried		0.220				
	Grain Received		0.356				
	Grain Dried		0.220				

- a) Record the current date. (Month, Year)
- b) Record the amount of grain received this month in the top row and the amount of grain dried in the lower row
- c) PM composite emission factor
- d) Calculate using the following equation: $(d) = (b)^{\text{received}} \times (c)^{\text{received}} / 2000 + (b)^{\text{dried}} \times (c)^{\text{dried}} / 2000$
- e) Record the monthly PM emissions (d) from this month last year.
- f) Record the 12-month total emissions (g) from last month
- g) Calculate the new 12-month PM₁₀ emissions using the following equation. $(g) = (d) + (f) - (e)$

A rolling 12-month total less than 250.0 tons of PM implies compliance with Special Condition 2.A.

APPENDIX A

Abbreviations and Acronyms

% percent	Mgal 1,000 gallons
°F degrees Fahrenheit	MW megawatt
acfm actual cubic feet per minute	MHDR maximum hourly design rate
BACT Best Available Control Technology	MMBtu Million British thermal units
BMPs Best Management Practices	MMCF million cubic feet
Btu British thermal unit	MSDS Material Safety Data Sheet
CAM Compliance Assurance Monitoring	NAAQS National Ambient Air Quality Standards
CAS Chemical Abstracts Service	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CEMS Continuous Emission Monitor System	NO_xnitrogen oxides
CFR Code of Federal Regulations	NSPS New Source Performance Standards
CO carbon monoxide	NSR New Source Review
CO₂ carbon dioxide	PMparticulate matter
CO_{2e} carbon dioxide equivalent	PM_{2.5} particulate matter less than 2.5 microns in aerodynamic diameter
COMS Continuous Opacity Monitoring System	PM₁₀ particulate matter less than 10 microns in aerodynamic diameter
CSR Code of State Regulations	ppm parts per million
dscf dry standard cubic feet	PSD Prevention of Significant Deterioration
EIQ Emission Inventory Questionnaire	PTE potential to emit
EP Emission Point	RACT Reasonable Available Control Technology
EPA Environmental Protection Agency	RAL Risk Assessment Level
EU Emission Unit	SCC Source Classification Code
fps feet per second	scfm standard cubic feet per minute
ft feet	SDS Safety Data Sheet
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	SSM Startup, Shutdown & Malfunction
hr hour	tph tons per hour
hp horsepower	tpy tons per year
lb pound	VMT vehicle miles traveled
lbs/hr pounds per hour	VOC Volatile Organic Compound
MACT Maximum Achievable Control Technology	
µg/m³ micrograms per cubic meter	
m/s meters per second	



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

June 2, 2020

Thomas Stillman
Facility Manager
Bunge North America, Inc.
PO Box 109
Caruthersville, MO 63830

RE: New Source Review Permit - Project Number: 2020-02-033

Dear Thomas Stillman:

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 amended 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.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

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



Thomas Stillman
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If you have any questions regarding this permit, please do not hesitate to contact Jonathan Halla, 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

A handwritten signature in blue ink, appearing to read 'S Heckenkamp', is written over the typed name.

Susan Heckenkamp
New Source Review Unit Chief

SH:hja

Enclosures

c: Southeast Regional Office
PAMS File: 2020-02-033

Permit Number: 062020-002