



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: 012016-004 Project Number: 2015-09-014
Installation Number: 097-0071

Parent Company: General Mills Operations, LLC
Parent Company Address: #1 General Mills Blvd, Minneapolis, MN 55246
Installation Name: General Mills Operations, LLC
Installation Address: 3007 Stephens Blvd, Joplin, MO 64804
Location Information: Jasper County, S18, T27N, R32W

Application for Authority to Construct was made for:
New conveyor line to transfer flour to make pies. 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.

Chad Stephenson

Prepared by
Chad Stephenson
New Source Review Unit

Kyra L Moore

Director or Designee
Department of Natural Resources

JAN 08 2016

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 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 start up 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 start up 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.

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."

General Mills Operations, LLC
Jasper County, S18, T27N, R32W

1. Control Device Requirement-Baghouse
 - A. General Mills Operations, LLC shall control emissions from the emission points in Table 1 using baghouses as specified in the permit application.

Table 1: Emission Units Controlled by Baghouses

Designation	Description
EP-S-P1	Silo Line 1 (Silo #9)
EP-S-P2	Silo Line 1 (Silo #10)
EP-S-P3	Silo Line 1 (Silo #11)
EP-S-P40	Silo Line 1 (Silo #14)
EP-S-P10	Silo Line 4 (Silo #1)
EP-S-P11	Silo Line 4 (Silo # 2)
EP-S-P12	Silo Line 1-5 Dusting Flower (Silo #12)
EP-S-P27	Silo Line 7 (Silo #24)
EP-S-P28	Silo Line 7 (Silo #25)
EP-S-P29	Silo Line 7 (Silo #26)
EP-S-P7	Silo Line 9 (Silo #6)
EP-S-P8	Silo Line 9 (Silo #7)
EP-S-P9	Silo Line 9 (Silo #8)
EP-S-P19	Sifter Flour Receiver Line 9

- 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 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. General Mills Operations, LLC shall monitor and record the operating pressure drop across the baghouses at least once every thirty days and make a visual inspection at least once every 24 hours logging the

SPECIAL CONDITIONS:

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

date/time and observation. If the visual inspection indicates any visible particulate, then a pressure drop reading will be monitored and logged. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance specifications. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

- E. The requirement for monthly pressure drop recordings described in 1.D. may be temporarily suspended during heavy precipitation or inclement weather (i.e. rain exceeding 0.30 inches per day or silos covered in snow or ice). In the event of a delay due to weather, the reading shall take place as soon as weather safely allows.
- F. General Mills Operations, LLC shall maintain a copy of the baghouse manufacturer's performance warranty on site.
- G. General Mills Operations, LLC 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.

2. Operational Limitation

- A. General Mills Operations, LLC shall not exceed the annual process rate of flour on Silo Line 1, Silo Line 4, Silo Line 7, and Silo Line 9 and the annual process rate of dusting flour on Silo Line 1-5 listed in Table 2.

Table 2: Limited Annual Process Rates

Silo Line	Limited Annual Process Rate (tons)
Silo Line 1	136,656
Silo Line 4	68,328
Silo Line 7	181,320
Silo Line 9	9,918
Dusting Flower (Silo Line 1-5)	86,724

- B. General Mills Operations, LLC shall record the monthly and the sum of the most recent consecutive 12 month process rate of flour on Silo Line 1, Silo Line 4, Silo Line 7 and Silo Line 9 and of dusting flower used on Silo Line 1-5. These records shall be kept on-site for five (5) years and shall be made immediately available for inspection to Department of Natural Resources' personnel upon request.

SPECIAL CONDITIONS:

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

3. Record Keeping and Reporting Requirements
 - A. General Mills Operations, LLC 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. General Mills Operations, LLC 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: 2015-09-014
Installation ID Number: 097-0071
Permit Number:

Installation Address:
General Mills Operations, LLC
3007 Stephens Blvd
Joplin, MO 64804

Parent Company:
General Mills Operations, LLC
#1 General Mills Blvd
Minneapolis, MN 55246

Jasper County, S18, T27N, R32W

REVIEW SUMMARY

- General Mills Operations, LLC has applied for authority to install a new conveyor line to transfer flour to make pies
- The application was deemed complete on September 22, 2015.
- HAP emissions are expected from the natural gas combustion but only in amounts less than their respective SMAL.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Baghouses are being used to control the particulate emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Particulate potential are conditioned below de minimis levels by use of control devices.
- This installation is located in Jasper 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 the application are below de minimis levels.
- Emissions testing is not required for the equipment.

- A Basic Operating Permit application is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

General Mills Operations, LLC operates a flour process plant in Joplin, Missouri. This installation was installed prior to 1980. Two existing construction permit have been issued to this installation. The existing potential emissions in both permits were estimated to be less than de minimis levels

The following New Source Review permits have been issued to General Mills Operations, LLC from the Air Pollution Control Program.

Table 3: Permit History

Permit Number	Description
0281-001	Indirect-fired pizza crust cooker
102000-025	Dough line expansion

PROJECT DESCRIPTION

According to the applicant, General Mills intends to install a new conveyor line (Silo Line 9) to transfer flour to make pies. Silo Line 9 will be located at the raw material process area of the plant, replacing the existing Silo Line 3. The flour that is currently transferred via Silo Line 3 will be distributed to the existing Silo Line 1, Silo Line 4 and Silo Line 7. Silo EP-S-P12 will supply dusting flour to Silo Line 1-5. The dusting flour is applied to the product to keep it from sticking on the equipment rollers. All of the silo lines are controlled by baghouses. The flour collected in the baghouses is recycled back to the system. General Mills is submitting this permit application to request the operation of baghouses be made a federally enforceable requirement in order to apply the control efficiency when calculating potential emissions from the silo lines. The only emissions from the silo lines are particulate matter emissions.

In addition to adding Silo Line 9 and modifying Silo Line 1, 4 and 7, General Mills also plans to install two natural gas fired process heaters (ACAU-23 and ACAU-24). The natural gas process heaters have a heat capacity of 2.18 MMBtu/hr and 0.43 MMBtu/hr, respectively.

Limits were taken on throughput process rates for Silo Lines 1, 4, 7 and 9 as well as the dusting flour Silo Line 1-5. The maximum hourly design rates of these lines were not known; therefore, the annual limits were implemented to establish maximum rates to estimate potential emissions of the project.

EMISSIONS/CONTROLS EVALUATION

The particulate emissions for flour conveying and storage were calculated using the emission factor for raw material transfer obtained from WebFire (Factor Information Retrieval System), EPA's online emission factor repository, for the Source Classification Codes (SCC) 3-05-006-12. The factor is given as total PM₁₀ emissions and the same factor was assumed for PM, PM₁₀ and PM_{2.5}. A capture efficiency of 100%, with 99 percent control was used because all processes are vented to a baghouse.

The emissions from the two process heaters were calculated using emissions factors for natural gas combustion, found in EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.4, *Natural Gas Combustion*, July 1998.

The following table provides an emissions summary for this project. Existing potential emissions were taken from construction permit #102000-025. Existing actual emissions were taken from the installation's 2013 EIQ. Potential emissions of the application represent the potential of the new and modified equipment, assuming continuous operation (8760 hours per year). Conditioned potential emissions of the application represent the potential of the new equipment, after accounting for applicable special conditions.

Table 4: 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	Conditioned Potential Emissions of the Application
PM	25.0	N/D	N/D	36.96	0.39
PM ₁₀	15.0	15.85	0.58	36.96	0.45
PM _{2.5}	10.0	N/D	0.38	36.96	0.45
SO _x	40.0	0.03	0.0031	0.01	0.01
NO _x	40.0	5.21	4.28	1.12	1.12
VOC	40.0	0.29	0.22	0.06	0.06
CO	100.0	4.38	1.46	0.94	0.94
HAPs	10.0/25.0	0.01	N/D	0.02	0.02

N/A = Not Applicable; 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

General Mills Operations, LLC 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*, 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 September 4, 2015, received September 8, 2015, designating General Mills Operations, LLC as the owner and operator of the installation.

APPENDIX A

Abbreviations and Acronyms

%	percent	m/s	meters per second
°F	degrees Fahrenheit	Mgal	1,000 gallons
acfm	actual 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	SDS	Safety Data Sheet
GHG	Greenhouse Gas	SIC	Standard Industrial Classification
gpm	gallons per minute	SIP	State Implementation Plan
gr	grains	SMAL	Screening Model Action Levels
GWP	Global Warming Potential	SO_x	sulfur oxides
HAP	Hazardous Air Pollutant	SO₂	sulfur dioxide
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		

Mr. Mike Darr
Environmental, Health & Safety Manager
General Mills Operations, LLC
3007 Stephens Blvd
Joplin, MO 64804

RE: New Source Review Permit - Project Number: 2015-09-014

Dear Mr. Darr:

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.

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, Truman State Office Building, Room 640, 301 W. High Street, 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 permit, please do not hesitate to contact Chad Stephenson, at the Department of Natural Resources' Air Pollution Control Program,

Mr. Mike Darr
Page Two

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:csl

Enclosures

c: Southwest Regional Office
PAMS File: 2015-09-014

Permit Number: