

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT BOOK

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: 122014-006

Project Number: 2014-10-062  
Installation Number: 031-0112

Parent Company: SEMO Milling LLC

Parent Company Address: 261 River Road, Scott City, MO 63780

Installation Name: SEMO Milling LLC

Installation Address: 261 River Road, Scott City, MO 63780

Location Information: Cape Girardeau County, S21, T30N, R14E

Application for Authority to Construct was made for:

Addition of [REDACTED] and handling equipment to an existing product stream. 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.

DEC 24 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 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.

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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."*

SEMO Milling LLC  
Cape Girardeau County, S21, T30N, R14E

1. Control Device Requirement- Baghouse and Sock Filters
  - A. SEMO Milling LLC shall control emissions from the following equipment using baghouses or sock filters as specified in the permit application.

**Table 1: Equipment to be Controlled by Baghouses or Sock Filters**

Emission Unit ID	Description	Baghouse/Sock Filters
300	710 Flour Positive Pneumatic Transfer	Baghouse
301	Plus 3.5 Positive Pneumatic Transfer	Baghouse
302	Meal Hopper/Conveyer Feeder	Sock Filters
303	710 Flour Hopper/Conveyor Feeder	Sock Filters
304	Plus 3.5 Hopper/Conveyor Feeder	Sock Filters
305	Pos. Pneumatic Transfer	Baghouse
307	Kice Waterfall Aspirator/Cooler	Baghouse
308	Pos. Pneumatic Transfer	Baghouse

- B. The baghouses and sock filters shall be operated and maintained in accordance with the manufacturer's specifications. The control devices 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 and sock filters shall be kept on hand at all times. The bags and filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
- D. SEMO Milling LLC shall monitor and record the operating pressure drop across the baghouses and sock filters at least once every 24 hours while the equipment are in operation. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

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### SPECIAL CONDITIONS:

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

- E. SEMO Milling LLC shall maintain a copy of the baghouse and sock filters manufacturer's performance warranty on site.
- F. SEMO Milling LLC shall maintain an operating and maintenance log for the baghouses and sock filters 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. Control Device Requirement – Cyclones
  - A. SEMO milling LLC shall control emissions from the [REDACTED] screw conveyor (EU306) using a cyclone as specified in the permit application.
  - B. The cyclone shall be operated in accordance with the manufacturer's specifications.
- 3. Control Device Equipment – Enclosures  
SEMO Milling LLC shall enclose all equipment listed in Special Condition 1.A. with duct work such that the only openings are for material entry and exit and emissions exiting to the control device.
- 4. Record Keeping and Reporting Requirements  
SEMO Milling LLC shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.

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

Project Number: 2014-10-062  
Installation ID Number: 031-0112  
Permit Number:

SEMO Milling LLC  
261 River Road  
Scott City, MO 63780

Complete: October 14, 2014

Parent Company:  
SEMO Milling LLC  
261 River Road  
Scott City, MO 63780

Cape Girardeau County, S21, T30N, R14E

REVIEW SUMMARY

- SEMO Milling LLC has applied for authority to install equipment for the [REDACTED] of an existing grain product stream.
- HAP emissions are not expected from the proposed equipment.
- 40 CFR Subpart Dc, *Standards of Performance for Small Industrial-Commercial Institutional Steam Generating Units*, of the NSPS applies to the installation (for an existing boiler that is not part of this project)
- 40 CFR 60, Subpart DD, *Standards of Performance for Grain Elevators*, of the NSPS does not apply to this installation because the installation has maximum storage capacity less than one million bushels.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Baghouses and sock filters are being used to control the particulates emissions from the equipment in this permit. Cyclones are also being used for the equipment. However, they are used more for product capture/conveying than as pollution control devices.
- 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 below de minimis levels.
- This installation is located in Cape Girardeau 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.
- An amendment to the facility's Basic Operating Permit is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

SEMO Milling LLC is an existing de minimis source located in Cape Girardeau County. The installation produces food grade corn products including flour, corn meal, and brewer's grits. A process by-product, known as hominy, is also produced for the animal feed industry. The installation is considered a minor source for construction permits and a basic source for operating permits. Although the facility's PTE for each pollutant is less than their respective de minimis level, the facility is required to obtain a basic operating permit because its boilers are subject to NSPS subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*.

The following New Source Review permits have been issued to SEMO Milling LLC from the Air Pollution Control Program.

**Table 2: Permit History**

Permit Number	Description
072012-014	Installation of various equipment such as degerminators, sifters, aspirators, etc.

### PROJECT DESCRIPTION

SEMO Milling LLC proposes to add [REDACTED] and handling equipment for an existing ground corn product stream. The facility has asked to keep the process descriptions confidential and therefore, no additional information is given about the process. The confidential version of the permit is issued under project no. 2014-08-054

The maximum hourly design rate of the proposed equipment is [REDACTED] tph. There will be no increase in the processing rate of any other equipment at the plant because the equipment processes an existing product stream. The [REDACTED] is electric powered. Some of the equipment (all 300 series emission unit number) is new while others (all 100 and 200 series emission unit numbers) are existing. Particulate emissions are controlled using baghouses. For the existing equipment, Permit No. 072012-014 already requires that baghouses be operated and therefore, no special condition is written in this permit requiring the use of baghouses for the existing

equipment. For some of the equipment, a cyclone is connected upstream of the baghouse. However, these cyclones act more as product capturing/conveying equipment than pollution control devices. Therefore, there are no special conditions in this permit requiring their use as a control device. The [REDACTED] conveyor uses a cyclone as a control device and therefore, Special Condition 2 requires the use of a cyclone for the [REDACTED] conveyor.

## 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. Pollutants expected from this project are PM<sub>2.5</sub>, PM<sub>10</sub> and PM. Emissions from the hoppers, conveyors, sifters, storage bins, and hammermills were calculated using emission factors in AP-42, Chapter 9.9.1, *Grain Elevator and Processes*, (5/2003). There are currently no emission factors available for pneumatic conveying of grain. However, there are emission factors for the pneumatic conveying of cement, which should yield a conservative estimate of emissions. Therefore, emissions from pneumatic conveyors were calculated using emission factors in AP-42, Chapter 11.12, *Concrete Batching*, (6/2006). The baghouses are given a control efficiency of 99% for PM<sub>2.5</sub>, PM<sub>10</sub> and PM, which is the default efficiency used by the Air Pollution Control Program. The sock filters were given a control efficiency of 95% based on manufacturer's testing data. For the cyclone used to control emissions from the [REDACTED] conveyor, PM<sub>2.5</sub>, PM<sub>10</sub> and PM control efficiency used for the calculations were 10%, 35%, and 50%, respectively, which were taken from AP-42, Appendix B.2. All of the equipment is completely enclosed through duct work and should have capture efficiency of 100%. However, in a recent site visit performed on the facility, an amount of dust that does not commensurate with a 100% capture efficiency was observed on the floor of the plant. Therefore, a capture efficiency of 90% was used to estimate emissions. For cyclones that are used as product capturing/conveying device, their control efficiencies were not taken into account for the calculations.

The following table provides an emissions summary for this project. Existing potential emissions were taken from Permit No. 072012-014. 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).

**Table 3: 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	New Installation Conditioned Potential
PM	25.0	N/D	N/D	6.57	N/A
PM <sub>10</sub>	15.0	10.4	1.56	3.72	N/A
PM <sub>2.5</sub>	10.0	2.1	0.79	3.13	N/A
SO <sub>x</sub>	40.0	0.1	N/D	N/A	N/A
NO <sub>x</sub>	40.0	5.3	0.49	N/A	N/A
VOC	40.0	0.7	0.06	N/A	N/A
CO	100.0	4.5	0.42	N/A	N/A
GHG (CO <sub>2</sub> e)	100,000	N/D	N/D	N/A	N/A
GHG (mass)	100.0 / 250.0	N/D	N/D	N/A	N/A
HAPs	10.0/25.0	0.5	N/D	N/A	N/A

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 below de minimis levels.

### APPLICABLE REQUIREMENTS

SEMO Milling 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

#### SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter from Industrial Processes*, 10 CSR 10-6.400
  - Equipment of this project is exempt from this rule because their PTE at maximum design capacity is less than 0.5 lb/hr.

#### 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.

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Chia-Wei Young  
New Source Review Unit

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Date

#### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated August 26, 2014, received August 26, 2014, designating SEMO Milling 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

<b>%</b> .....percent	<b>m/s</b> ..... meters per second
<b>°F</b> .....degrees Fahrenheit	<b>Mgal</b> ..... 1,000 gallons
<b>acfm</b> .....actual cubic feet per minute	<b>MW</b> ..... megawatt
<b>BACT</b> ..... Best Available Control Technology	<b>MHDR</b> ..... maximum hourly design rate
<b>BMPs</b> ..... Best Management Practices	<b>MMBtu</b> .... Million British thermal units
<b>Btu</b> ..... British thermal unit	<b>MMCF</b> ..... million cubic feet
<b>CAM</b> ..... Compliance Assurance Monitoring	<b>MSDS</b> ..... Material Safety Data Sheet
<b>CAS</b> ..... Chemical Abstracts Service	<b>NAAQS</b> ... National Ambient Air Quality Standards
<b>CEMS</b> ..... Continuous Emission Monitor System	<b>NESHAPs</b> National Emissions Standards for Hazardous Air Pollutants
<b>CFR</b> ..... Code of Federal Regulations	<b>NO<sub>x</sub></b> ..... nitrogen oxides
<b>CO</b> .....carbon monoxide	<b>NSPS</b> ..... New Source Performance Standards
<b>CO<sub>2</sub></b> .....carbon dioxide	<b>NSR</b> ..... New Source Review
<b>CO<sub>2</sub>e</b> .....carbon dioxide equivalent	<b>PM</b> ..... particulate matter
<b>COMS</b> ..... Continuous Opacity Monitoring System	<b>PM<sub>2.5</sub></b> ..... particulate matter less than 2.5 microns in aerodynamic diameter
<b>CSR</b> ..... Code of State Regulations	<b>PM<sub>10</sub></b> ..... particulate matter less than 10 microns in aerodynamic diameter
<b>dscf</b> .....dry standard cubic feet	<b>ppm</b> ..... parts per million
<b>EQ</b> ..... Emission Inventory Questionnaire	<b>PSD</b> ..... Prevention of Significant Deterioration
<b>EP</b> ..... Emission Point	<b>PTE</b> ..... potential to emit
<b>EPA</b> ..... Environmental Protection Agency	<b>RACT</b> ..... Reasonable Available Control Technology
<b>EU</b> ..... Emission Unit	<b>RAL</b> ..... Risk Assessment Level
<b>fps</b> .....feet per second	<b>SCC</b> ..... Source Classification Code
<b>ft</b> ..... feet	<b>scfm</b> ..... standard cubic feet per minute
<b>GACT</b> ..... Generally Available Control Technology	<b>SDS</b> ..... Safety Data Sheet
<b>GHG</b> ..... Greenhouse Gas	<b>SIC</b> ..... Standard Industrial Classification
<b>gpm</b> ..... gallons per minute	<b>SIP</b> ..... State Implementation Plan
<b>gr</b> ..... grains	<b>SMAL</b> ..... Screening Model Action Levels
<b>GWP</b> ..... Global Warming Potential	<b>SO<sub>x</sub></b> ..... sulfur oxides
<b>HAP</b> ..... Hazardous Air Pollutant	<b>SO<sub>2</sub></b> ..... sulfur dioxide
<b>hr</b> ..... hour	<b>tph</b> ..... tons per hour
<b>hp</b> ..... horsepower	<b>tpy</b> ..... tons per year
<b>lb</b> ..... pound	<b>VMT</b> ..... vehicle miles traveled
<b>lbs/hr</b> ..... pounds per hour	<b>VOC</b> ..... Volatile Organic Compound
<b>MACT</b> ..... Maximum Achievable Control Technology	
<b>µg/m<sup>3</sup></b> .....micrograms per cubic meter	

Mr. Charles Schiwitz  
Project/Environmental/Health Safety Manager  
SEMO Milling LLC  
261 River Road  
Scott City, MO 63780

RE: New Source Review Permit - Project Number: 2014-10-062

Dear Mr. Schiwitz:

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 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 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, P.O. Box 1557, Jefferson City, MO 65102 website: [www.ao.mo.gov/ahc](http://www.ao.mo.gov/ahc).

If you have any questions regarding this permit, contact Chia-Wei Young, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or (573) 751-4817.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp  
New Source Review Unit Chief

SH:cyl

Enclosures

c: Southeast Regional Office  
PAMS File: 2014-10-062  
Permit Number: