

STATE OF MISSOURI

1/21/2014



# 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: **012014-008**

Project Number: 2013-10-013  
Installation Number: 009-0072

Parent Company: The Scoular Company - Butterfield

Parent Company Address: 2027 Dodge Street, Omaha, NE 68102

Installation Name: The Scoular Company - Butterfield

Installation Address: FR 2115, Butterfield, MO 65623

Location Information: Barry County, S25, T24N, R28W

Application for Authority to Construct was made for:  
Grain Storage and Distribution. This review was conducted in accordance with Section (6),  
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.

JAN 21 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.

Page No.	3
Permit No.	
Project No.	2013-10-013

**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."*

The Scoular Company - Butterfield  
Barry County, S25, T24N, R28W

1. **PM<sub>10</sub> Emission Limitation**
  - A. The Scoular Company - Butterfield shall emit less than 15.0 tons of PM<sub>10</sub> in any consecutive 12-month period from the entire installation (see Table 1).
  - 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. **Truck Receiving**
  - A. The Scoular Company – Butterfield shall not receive grain from straight trucks in excess of 25% of total grain delivered by trucks.
  - 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.
3. **Control Device Requirements - Internal Handling**
  - A. The Scoular Company – Butterfield shall fully enclose all internal handling associated with EP-02 and their drop/transfer points. Internal handling shall not aspirate to the ambient air.
  - B. Internal handling is defined as emissions originating from any grain transfer, excluding process emissions from receiving (EP-01 and EP-05), truck shipping (EP-04 and EP-08), haul roads (EP-10), and bin vents (EP-03 and EP-07).

Page No.	4
Permit No.	
Project No.	2013-10-013

**SPECIAL CONDITIONS:**

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

- C. The Scoular Company – Butterfield’s personnel shall inspect the enclosures listed in Special Condition 3.A on a quarterly basis for any signs of leakage, based on sight or sound. The results of the inspection shall be recorded along with documentation regarding any necessary corrective action.
4. Haul Road Watering
- A. The Scoular Company - Butterfield shall water haul roads whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary.
  - B. Watering may be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.
5. Record Keeping and Reporting Requirements
- A. The Scoular Company - Butterfield 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. The Scoular Company - Butterfield shall report to the Air Pollution Control Program’s Compliance/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 show an exceedance of a limitation imposed by this permit.

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

Project Number: 2013-10-013  
Installation ID Number: 009-0072  
Permit Number:

The Scoular Company - Butterfield  
FR 2115  
Butterfield, MO 65623

Complete: October 8, 2013

Parent Company:  
The Scoular Company - Butterfield  
2027 Dodge Street  
Omaha, NE 68102

Barry County, S25, T24N, R28W

REVIEW SUMMARY

- The Scoular Company - Butterfield has applied for authority to construct a grain storage and distribution facility.
- HAP emissions are not expected from the proposed equipment.
- 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.
- No air pollution control equipment is being used in association with the new equipment. The unpaved haul roads are being watered to control particulate emissions.
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM<sub>10</sub> are conditioned below de minimis levels, and indirectly conditioned particulate matter (PM) remains above de minimis level, but below major source levels.
- This installation is located in Barry 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.
- No Operating Permit is required for this installation.

- Approval of this permit is recommended with special conditions.

### INSTALLATION / PROJECT DESCRIPTION

The Scoular Company (Scoular) purchased the property located approximately 1.2 miles north of Butterfield, Missouri, on Highway 37 in Barry County. There are five existing bins, an existing storage building, and an existing Quonset building. The proposed grain elevator will receive, store, and ship grain. The facility will have two grain receiving pits that will receive grain from both hopper and straight trucks. One of these receiving pits will also have the capability of receiving grain from railcars. Only one of the pits can receive grain at any given time. The MHDR of these pits is 20,000 bushels per hour (600 tons per hour). This rate is dependent upon the capacity of the grain elevator leg (20,000 bushels per hour). Scoular will use a portable conveying equipment with a MHDR of 15,000 bushels per hour (450 tons per hour) to transfer grain to and from the two buildings. Grain will be received by a combination of approximately 75% hopper trucks and 25% straight trucks, as well as some from rail. Grain receiving from straight trucks will not exceed 25% as stated in Special Condition 2.A. Grain will be shipped by rail and hopper trucks. There is no grain dryer at this facility. The following table lists the emission points and description of the equipment.

Table 1: The Scoular Company – Butterfield, Missouri

Emission Points	Equipment Description	MHDR
EP-01	Grain Receiving (75% Hopper/25% Straight) Pit1/Pit2	600 tph
EP-02	Grain Handling	600 tph
EP-03	Storage Bins	600 tph
EP-04	Grain Loading (Trucks)	600 tph
EP-05	Grain Receiving (Portable Auger)	450 tph
EP-06	Grain Handling (Overhead conveyor)	450 tph
EP-07	Storage Bins (Rectangle building and Quonset building)	450 tph
EP-08	Grain Loading (Truck)	450 tph
EP-10	Haul Roads	VMT*

\*The MHDR varies with the type of truck doing the hauling

The grain will consist of corn, wheat, beans, soybean meal, corn screenings and dry distillers. The grain elevator will have a permanent grain storage capacity approximately equal to 632,640 bushels and, therefore will not be subject to the New Source Performance Standards for Grain Elevators (NSPS Subpart DD).

The haul roads will have various routes to the designated grain receiving/shipping areas.

This is the first permit to be issued to The Scoular Company - Butterfield from the Air Pollution Control Program.

### 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. Haul road emissions were calculated using AP-42, Section 13.2.2, *Unpaved Roads*, November 2006. Emissions from the haul road will be controlled (50%) by using undocumented watering.

Even though the project will handle corn more than any other grain, the highest density for grains to be handled was used to convert processing rates in bushels to tons, 60 pounds per bushel. Therefore, no special condition is required for throughputs of corn, beans, wheat, or other grains.

Grain will be received by combination of straight and hopper trucks and railcar. The grain receiving (EP-01 and EP-05) was calculated using the scenario of 100% truck receiving because truck receiving has a higher emission rate than rail car receiving. This conservative method avoids a special condition and record keeping for the amount of grain that was received by truck/rail. It is expected that the majority of the trucks used will be hopper trucks. The grain receiving (EP-01 and EP-05) emissions were calculated using the scenario of 75% hopper trucks and 25% straight trucks because the grain received from straight trucks have a higher emission rate. Likewise, the receiving/shipping haul roads (EP-10) emissions were calculated using the same 75/25 split because straight trucks typically haul less than hopper trucks requiring more trips, thus greater VMTs. This method requires a special condition and record keeping for amount of grain that was received by straight trucks.

The following table provides an emissions summary for this project. Existing potential emissions and existing actual emissions were not available since this is a new facility. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year).

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	N/A	N/A	1,742.29	47.71
PM <sub>10</sub>	15.0	N/A	N/A	547.83	<15.0
PM <sub>2.5</sub>	10.0	N/A	N/A	82.25	2.25
SO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
NO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
GHG (CO <sub>2</sub> e)	75,000 / 100,000	N/A	N/A	N/A	N/A
GHG (mass)	0.0 / 100.0 / 250.0	N/A	N/A	N/A	N/A
HAPs	10.0/25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

## 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 PM<sub>10</sub> are conditioned below de minimis levels, and indirectly conditioned particulate matter (PM) remains above de minimis level, but below major source levels.

## APPLICABLE REQUIREMENTS

The Scoular Company - Butterfield 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.

### GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *No Operating Permits* are required because the Scoular Company is requesting a de minimis limit for the entire facility.
- *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. Storage bin vents' potential emission rate of 7.5 pounds per hour of PM is less than 71.163 lbs/hr (Process Rate Rule), and therefore complies with this regulation.

## 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.

---

Kathy Kolb  
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 September 25, 2013, received October 8, 2013, designating The Scoular Company - Butterfield as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

## Attachment A – PM<sub>10</sub> Compliance Worksheet

The Scoular Company - Butterfield  
 Farm Road 2115, Butterfield , MO, Barry County, S25 T24N R28W  
 Project Number: 2013-10-013  
 Installation ID Number: 009-0072  
 Permit Number: \_\_\_\_\_

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

Month/Year	Emission Units (EP-01-EP-08, Haul Roads)		1 Month Total (Straight)	Straight vs Hopper Trucks	1 Month Total PM <sub>10</sub> Emissions	1 Month Total PM <sub>10</sub> Emissions	Previous Month's 12 Month Total	Previous Year's 1 month Total	12 month Total PM <sub>10</sub> Emissions
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
	Amount of Grain Received (tons)	Composite Emission Factor (lbs. PM <sub>10</sub> per tons grain)	Amount of grain received by straight trucks	Percentage of grain received by straight trucks	Monthly PM <sub>10</sub> Emissions (lbs.)	Monthly PM <sub>10</sub> Emissions (tons)	12 month Rolling Total PM <sub>10</sub> Emissions (tons)	Monthly PM <sub>10</sub> Emissions (tons)	12 month Rolling Total PM <sub>10</sub> Emissions (tons)
Example	20,000	0.1193	4,000	20%	2386	1.193			
		0.1193							
		0.1193							
		0.1193							
		0.1193							
		0.1193							
		0.1193							
		0.1193							
		0.1193							
		0.1193							
		0.1193							
		0.1193							
		0.1193							
		0.1193							
		0.1193							

Instructions:  
 C2 = the total tons of grain received during the month and year indicated in C1  
 C3 = 0.1193 (lbs/ tons), the composite emission factor for emission units (EP01-EP08, haul roads)  
 C5=C4 ÷ C2 Note C5 must be less than 25% to comply with Special Condition 2.A.  
 C6 = C2 × C3  
 C7 = C6 ÷ 2000  
 C8 = the 12 month rolling total PM<sub>10</sub> emissions from the previous month (C10 from previous month)  
 C9 = the monthly total PM<sub>10</sub> emissions from the previous year  
 C10 = C7 + C8 – C9 Note: A value less than 15.0 tons of PM<sub>10</sub> is necessary for continued compliance.

## 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>	
<b>CFR</b> .....	Code of Federal Regulations	.....	National Emissions Standards for Hazardous Air Pollutants
<b>CO</b> .....	carbon monoxide	<b>NO<sub>x</sub></b> .....	nitrogen oxides
<b>CO<sub>2</sub></b> .....	carbon dioxide	<b>NSPS</b> .....	New Source Performance Standards
<b>CO<sub>2e</sub></b> .....	carbon dioxide equivalent	<b>NSR</b> .....	New Source Review
<b>COMS</b> .....	Continuous Opacity Monitoring System	<b>PM</b> .....	particulate matter
<b>CSR</b> .....	Code of State Regulations	<b>PM<sub>2.5</sub></b> .....	particulate matter less than 2.5 microns in aerodynamic diameter
<b>dscf</b> .....	dry standard cubic feet	<b>PM<sub>10</sub></b> .....	particulate matter less than 10 microns in aerodynamic diameter
<b>EQ</b> .....	Emission Inventory Questionnaire	<b>ppm</b> .....	parts per million
<b>EP</b> .....	Emission Point	<b>PSD</b> .....	Prevention of Significant Deterioration
<b>EPA</b> .....	Environmental Protection Agency	<b>PTE</b> .....	potential to emit
<b>EU</b> .....	Emission Unit	<b>RACT</b> .....	Reasonable Available Control Technology
<b>fps</b> .....	feet per second	<b>RAL</b> .....	Risk Assessment Level
<b>ft</b> .....	feet	<b>SCC</b> .....	Source Classification Code
<b>GACT</b> .....	Generally Available Control Technology	<b>scfm</b> .....	standard cubic feet per minute
<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. Tom DiGiorgio  
Vice President  
The Scoular Company - Butterfield  
2027 Dodge Street  
Omaha, NE 68102

RE: New Source Review Permit - Project Number: 2013-10-013

Dear Mr. DiGiorgio:

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 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 Kathy Kolb, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone 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:kkk

Enclosures

c: Southwest Regional Office  
PAMS File: 2013-10-013

Permit Number: