

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 102014-005

Project Number: 2014-06-069  
Installation Number: 155-0068

Parent Company: Consolidated Grain & Barge, Co.

Parent Company Address: 201 North Missouri Street, Mound City, IL 62693

Installation Name: Consolidated Grain & Barge, Co.-Cottonwood Point

Installation Address: 2140 County Highway 553, Caruthersville, MO 63830

Location Information: Pemiscot County, S30, T17N, R13E

Application for Authority to Construct was made for:

The construction of a column dryer and associated grain handling equipment. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

---

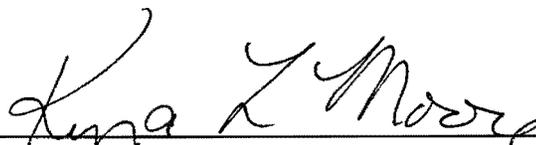
Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

OCT - 7 2014

---

EFFECTIVE DATE

  
\_\_\_\_\_  
DIRECTOR OR DESIGNEE  
DEPARTMENT OF NATURAL RESOURCES

## STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Department's Air Pollution Control Program of the anticipated date of startup of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual startup of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

Page No.	3
Permit No.	
Project No.	2014-06-069

**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."*

Consolidated Grain & Barge, Co.-Cottonwood Point  
Pemiscot County, S30, T17N, R13E

1. PM Emission Limitation
  - A. Consolidated Grain & Barge, Co.-Cottonwood Point shall emit less than 25.0 tons of PM in any consecutive 12-month period from the grain dryer and associated grain handling equipment from this project (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 Conditions 1.A.
2. Control Device Requirements – Total Enclosure
  - A. Consolidated Grain & Barge, Co.-Cottonwood Point shall enclose the following grain handling equipment, for the purpose of maximizing the capture efficiency of particulate matter emissions, with duct work at each drop point of the legs and conveyors associated with the column dryer.
  - B. Consolidated Grain & Barge, Co.-Cottonwood's personnel shall inspect the enclosures listed in Special Condition 2.A on a quarterly basis for any signs of a leak, based on sight or sound. The results of the inspection shall be recorded along with documentation regarding any necessary corrective action.
3. Record Keeping and Reporting Requirements
  - A. Consolidated Grain & Barge, Co.-Cottonwood Point 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. These records shall include MSDS for all materials used.
  - B. Consolidated Grain & Barge, Co.-Cottonwood Point 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 (5) REVIEW

Project Number: 2014-06-069  
Installation ID Number: 155-0068  
Permit Number:

Consolidated Grain & Barge, Co.-Cottonwood Point  
2140 County Highway 553  
Caruthersville, MO 63830

Complete: July 2, 2014

Parent Company:  
Consolidated Grain & Barge, Co.  
201 North Missouri Street  
Mound City, IL 62693

Pemiscot County, S30, T17N, R13E

REVIEW SUMMARY

- Consolidated Grain & Barge, Co.-Cottonwood Point has applied for authority to construct a new 2,000 bushel per hour (60 tons per hour) grain dryer and associated legs and conveyors.
- HAP emissions are expected from the proposed equipment. HAPs of concern from this process are from the combustion of liquefied propane for the column dryer.
- 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.
- Enclosures are being used to capture PM, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from grain legs and conveyors.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM are conditioned below de minimis levels.
- This installation is located in Pemiscot 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 PM are conditioned below de minimis.

- Emissions testing is not required for the equipment.
- Basic Operating Permit renewal has been submitted by Consolidated Grain & Barge; a determination will be made and updated by Air Pollution Control Program upon issuance of this permit.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

Consolidated Grain and Barge Co. (CGB) is located at 2140 County Highway 533 in Caruthersville, Missouri in Pemiscot County. It is also known as their Cottonwood Point facility. The facility was originally built in 1965 and owned by the Louis Dreyfus Corporation. The facility was leased by Consolidated Grain and Barge Co. in 2002 and purchased in 2007. The facility currently consists of two truck receiving pits rated at 20,000 and 25,000 bushels per hour. The main receiving pit is 20,000 bushels per hour (bph) and is controlled with a baghouse dust system. This pit gravity feeds a bucket elevator that discharges into the six storage bins through enclosed spouts. The second receiving pit was built in 1995 and is rated at 25,000 bph and has no controls. This pit gravity feeds a bucket elevator that discharges onto the shipping (barge loading) belt that is rated at 20,000 bhp. This leg also discharges to a spout for truck loadout. Total storage capacity is 351,000 bushels, consisting of five concrete bins; (four) 29,000 bushel capacity, (one) 8,000 bushel capacity; and (one) Welded steel bin 227,000 bushel capacity. The bins are reclaimed by two conveyor belts that are controlled with a baghouse dust system.

Consolidated Grain and Barge Co. receives the majority of their grain from local farmers and therefore is considered a country grain elevator instead of a grain terminal.

No New Source Review permits have been issued to Consolidated Grain & Barge, Co.- Cottonwood Point from the Air Pollution Control Program, however they do have a Basic Operating Permit and a renewal is pending this application.

### PROJECT DESCRIPTION

Consolidated Grain and Barge Co. (CGB) intends to construct a 2,000 bushel per hour (60 tons per hour) Meyer column dryer (Model 2000, 1998) with a maximum design rate of 19.34 million Btu/hr. It will be fueled by LPG/Propane. Associated grain handling equipment will be two enclosed conveyors (Esmmueller, Model 1213FB81, 2014) and two enclosed legs/bucket (Esmmueller, Model G12630, 2014) each rated at 6,000 bph. The grain handling equipment will be bottlenecked by the dryer's capacity.

Table 1: Project List

Emission Point	Equipment Description	MHDR
EP-7	Grain Handling	6,000 bu/hr (180 tph)
EP-8	Meyer Column Dryer (LPG/Propane fired)	2,000 bu/hr (60 tph) /19.34mmBtu/hr

## EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 9.91 *Grain Elevators and Processes*, May 2003 and from Section 1.4 *Natural Gas Combustion*, July 1998. Greenhouse gases (GHG) emission factors were obtained from 40 CFR 98, Mandatory Greenhouse Gas Reporting, October 30, 2009, Tables C-1 and C-2; 100 year Global Warming Potentials, Table A-1.

The following table provides an emissions summary for this project. Existing potential emissions are not available because they have not had any construction permits. Existing actual emissions were taken from the installation's 2013 EIQ. A full EIQ shall be submitted after the issuance of this permit to update the equipment list and throughputs. 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 (2013 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	Major	N/D	58.32	<25.0
PM <sub>10</sub>	15.0	Major	2.07	15.28	6.55
PM <sub>2.5</sub>	10.0	Major	0.08	3.15	1.35
SO <sub>x</sub>	40.0	N/D	N/A	1.39	0.60
NO <sub>x</sub>	40.0	N/D	N/A	12.04	5.16
VOC	40.0	N/D	N/A	0.48	0.20
CO	100.0	N/D	N/A	6.94	2.98
GHG (CO <sub>2</sub> e)	75,000 / 100,000	N/D	N/A	11,825.22	5,068.96
GHG (mass)	0.0 / 100.0 / 250.0	N/D	N/A	11,573.31	4,960.97
HAPs	10.0/25.0	N/D	N/A	0.16	0.07

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 PM are conditioned below de minimis.

### APPLICABLE REQUIREMENTS

Consolidated Grain & Barge, Co.-Cottonwood Point 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. (Basic Operating Permit renewal has been submitted by Consolidated Grain & Barge and will be updated by ACPC upon issuance of this permit.)
- *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
- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400. The column dryer potential emission rate of 13.2 pounds per hour of PM is less than 46.3 lbs/hr (Process Rate Rule), and therefore complies with this regulation.

#### 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.

---

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 June 20, 2014, received June 26, 2014, designating Consolidated Grain & Barge, Co. 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>2e</sub></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>SIC</b> ..... Standard Industrial Classification
<b>GHG</b> ..... Greenhouse Gas	<b>SIP</b> ..... State Implementation Plan
<b>gpm</b> ..... gallons per minute	<b>SMAL</b> ..... Screening Model Action Levels
<b>gr</b> ..... grains	<b>SO<sub>x</sub></b> ..... sulfur oxides
<b>GWP</b> ..... Global Warming Potential	<b>SO<sub>2</sub></b> ..... sulfur dioxide
<b>HAP</b> ..... Hazardous Air Pollutant	<b>tph</b> ..... tons per hour
<b>hr</b> ..... hour	<b>tpy</b> ..... tons per year
<b>hp</b> ..... horsepower	<b>VMT</b> ..... vehicle miles traveled
<b>lb</b> ..... pound	<b>VOC</b> ..... Volatile Organic Compound
<b>lbs/hr</b> ..... pounds per hour	
<b>MACT</b> ..... Maximum Achievable Control Technology	
<b>µg/m<sup>3</sup></b> .....micrograms per cubic meter	

Mr. Kurt Hasty  
Regional Operations Manager  
Consolidated Grain & Barge, Co.-Cottonwood Point  
201 North Missouri Street  
Mound City, IL 62693

RE: New Source Review Permit - Project Number: 2014-06-069

Dear Mr. Hasty:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Kathy Kolb, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp  
New Source Review Unit Chief

SH:kkk

Enclosures

c: Southeast Regional Office  
PAMS File: 2014-06-069

Permit Number:

*Celebrating 40 years of taking care of Missouri's natural resources.  
To learn more about the Missouri Department of Natural Resources visit [dnr.mo.gov](http://dnr.mo.gov).*