



## 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: **092015-014** Project Number: 2015-05-078  
Installation Number: 155-0068

Parent Company: Consolidated Grain and Barge Co.

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

Installation Name: Consolidated Grain and Barge Co.

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

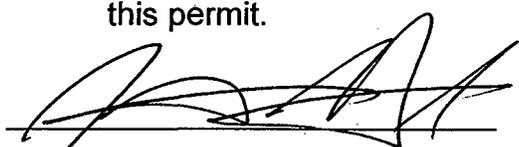
Location Information: Pemiscot County, S30, T17N, R13E

Application for Authority to Construct was made for:

The installation of a new 2000 bushel per hour (bu/hr) propane-fired column grain dryer and a new 6000 bu/hr enclosed conveyor. 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.

  
Prepared by  
Jordan Hindman  
New Source Review Unit

  
Director or Designee  
Department of Natural Resources

SEP 24 2015

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."*

Consolidated Grain and Barge Co.  
Pemiscot County, S30, T17N, R13E

1. Annual PM<sub>10</sub> Emission Limitation
  - A. Consolidated Grain and Barge Co. shall emit less than 15.0 tons of PM<sub>10</sub> in any consecutive 12-month period from the emission points listed below.
    - 1) EP-C3, Fully Enclosed Conveyor
    - 2) EP-D2, Propane Column Grain Dryer
  - 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 Requirement – Conveyor Enclosure
  - A. Consolidated Grain and Barge Co. shall control particulate emissions from the conveyor (EP-C3) using a full enclosure around the conveyor and all drop/transfer points associated with EP-C3 as specified in the permit application.
  - B. Conveyor (EP-C3) emissions are defined as emissions originating from any grain transfer leading into the conveyor (EP-C3) from the column grain dryer (EP-D2) or from the conveyor (EP-C3) to any storage bin that is controlled by a bin vent filter.
  - C. Consolidated Grain and Barge Co. personnel shall inspect the enclosures listed in Special Condition 2.A on a quarterly basis for any signs of visible particulate emissions. If visible particulate emissions are present, corrective action must be taken to return the equipment back to the state of intended performance (such that visible particulate emissions are no longer present during operation). The results of the inspections, along with documentation regarding any corrective actions, shall be recorded.

**SPECIAL CONDITIONS:**

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

3. Record Keeping and Reporting Requirements
  - A. Consolidated Grain and Barge Co. 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. Consolidated Grain and Barge Co. 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: 2015-05-078  
Installation ID Number: 155-0068  
Permit Number:

Installation Address:

Consolidated Grain and Barge Co.  
2140 County Highway 553  
Caruthersville, MO 63830

Parent Company:

Consolidated Grain and Barge Co.  
201 North Missouri Street  
Mound City, IL 62693

Pemiscot County, S30, T17N, R13E

REVIEW SUMMARY

- Consolidated Grain and Barge Co. has applied for authority to construct for the installation of a new 2000 bushel per hour (bu/hr) propane-fired column grain dryer and a new 6000 bu/hr enclosed conveyor.
- The application was deemed complete on June 23, 2015.
- HAP emissions are expected from the proposed equipment. HAPs of concern from this process are associated with propane combustion during operation of the column grain dryer.
- None of the currently promulgated NSPS regulations apply to this installation. 40 CFR 60 Subpart DD, "Standards of Performance for Grain Elevators" does not apply to the equipment because the grain elevator/terminal has a permanent storage capacity of 351,000 bushels—less than the 2.5 million bushel limit that triggers this NSPS.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Full enclosures on the conveyor (EP-C3) are being used to control particulate emissions from the equipment in this application. No other pollutants are being controlled (in this application).
- 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.
- 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 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

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 (bph). The main receiving pit is 20,000 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 baghouse in place for particulate emission control. This pit gravity feeds a bucket elevator that discharges onto the shipping (barge loading) belt that is rated at 20,000 bph. 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.

The following New Source Review permits have been issued to Consolidated Grain and Barge Co. from the Air Pollution Control Program. Consolidated Grain and Barge Co. also has a basic operating permit in the renewal stage.

Table 1: Permit History

Permit Number	Description
102014-005	Add Column Grain Dryer

### PROJECT DESCRIPTION

Consolidated Grain and Barge Co. is installing a new column grain dryer (EP-D2) rated at 2,000 bushels per hour (bu/hr), as well as a new fully enclosed conveyor (EP-C3) rated at 6,000 bu/hr in order to transfer grain from the dryer to an existing grain storage

bin. The particulate emissions associated with the fully enclosed conveyor are controlled by the enclosure itself, but no other pollutants are controlled by any control devices in the application. The conveyor is bottlenecked by the grain dryer; therefore, the maximum hourly design rate (MHDR) used in all potential emission (PTE) calculations is equal to 60 tons of grain processed per hour—which is equal to 2,000 bu/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, 9.9.1 *Grain Elevators & Processes* (updated May 2003).

The conveyor is bottlenecked by the grain dryer; therefore, the maximum hourly design rate (MHDR) used in all potential emission (PTE) calculations is equal to 60 tons of grain processed per hour—which is equal to 2,000 bu/hr. Although actual bushel weights may vary, one bushel is assumed to weigh 60 pounds for uniformity in PTE calculations.

A 100% capture efficiency is given for capture of particulate emissions associated with the full enclosure on the conveyor (EP-C3). The control efficiency of the full enclosure, associated with the conveyor (EP-C3), is equal to 50% for particulate matter (PM), particulate matter less than 10 microns in aerodynamic diameter (PM<sub>10</sub>), and particulate matter less than 2.5 microns in aerodynamic diameter (PM<sub>2.5</sub>).

The following table provides an emissions summary for this project. Existing potential emissions were taken from construction permit #102014-005. Existing actual emissions were taken from the installation’s 2014 EIQ. 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 (2014 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential	Conditioned Potential Emissions of the Application
PM	25.0	<25.0	N/A	82.57	77.22	52.22
PM <sub>10</sub>	15.0	6.55	8.18	23.72	21.55	<15.00
PM <sub>2.5</sub>	10.0	1.35	1.17	6.59	5.52	4.17
SO <sub>x</sub>	40.0	0.60	0.0	1.39	1.48	0.88
NO <sub>x</sub>	40.0	5.16	0.0	12.04	12.77	7.61
VOC	40.0	0.20	0.0	0.48	0.50	0.30
CO	100.0	2.98	0.0	6.94	7.37	4.39
GHG (CO <sub>2e</sub> )	100,000	5,068.7	N/A	11,825.2	12,549.3	7,478.6
HAPs	10.0/25.0	0.07	0.0	0.16	0.17	0.10

N/A = Not Applicable

## 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

Consolidated Grain and Barge Co. 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 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 May 18, 2015, received May 26, 2015, designating Consolidated Grain and Barge Co. as the owner and operator of the installation.



## 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>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. Kurt Hasty  
Regional Operations Manager  
Consolidated Grain and Barge Co.  
201 North Market Street  
Mound City, IL 62693

RE: New Source Review Permit - Project Number: 2015-05-078

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 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, MO 65102, [www.oa.mo.gov/ahc](http://www.oa.mo.gov/ahc).

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

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp  
New Source Review Unit Chief

SH:jhl

Enclosures

c: Southeast Regional Office  
PAMS File: 2015-05-078  
Permit Number: