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

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.
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 Complete: July 2, 2014
2140 County Highway 553
Caruthersville, MO 63830

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$_{10}$, and PM$_{2.5}$ 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

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Equipment Description</th>
<th>MHDR</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-7</td>
<td>Grain Handling</td>
<td>6,000 bu/hr (180 tph)</td>
</tr>
<tr>
<td>EP-8</td>
<td>Meyer Column Dryer (LPG/Propane fired)</td>
<td>2,000 bu/hr (60 tph) /19.34mmBtu/hr</td>
</tr>
</tbody>
</table>
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)

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</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>25.0</td>
<td>Major</td>
<td>N/D</td>
<td>58.32</td>
<td>&lt;25.0</td>
</tr>
<tr>
<td>PM(_{10})</td>
<td>15.0</td>
<td>Major</td>
<td>2.07</td>
<td>15.28</td>
<td>6.55</td>
</tr>
<tr>
<td>PM(_{2.5})</td>
<td>10.0</td>
<td>Major</td>
<td>0.08</td>
<td>3.15</td>
<td>1.35</td>
</tr>
<tr>
<td>SO(_x)</td>
<td>40.0</td>
<td>N/D</td>
<td>N/A</td>
<td>1.39</td>
<td>0.60</td>
</tr>
<tr>
<td>NO(_x)</td>
<td>40.0</td>
<td>N/D</td>
<td>N/A</td>
<td>12.04</td>
<td>5.16</td>
</tr>
<tr>
<td>VOC</td>
<td>40.0</td>
<td>N/D</td>
<td>N/A</td>
<td>0.48</td>
<td>0.20</td>
</tr>
<tr>
<td>CO</td>
<td>100.0</td>
<td>N/D</td>
<td>N/A</td>
<td>6.94</td>
<td>2.98</td>
</tr>
<tr>
<td>GHG (CO(_2) e)</td>
<td>75,000 / 100,000</td>
<td>N/D</td>
<td>N/A</td>
<td>11,825.22</td>
<td>5,068.96</td>
</tr>
<tr>
<td>GHG (mass)</td>
<td>0.0 / 100.0 / 250.0</td>
<td>N/D</td>
<td>N/A</td>
<td>11,573.31</td>
<td>4,960.97</td>
</tr>
<tr>
<td>HAPs</td>
<td>10.0/25.0</td>
<td>N/D</td>
<td>N/A</td>
<td>0.16</td>
<td>0.07</td>
</tr>
</tbody>
</table>

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

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.

Attachment A – PM Compliance Worksheet

Consolidated Grain & Barge, Co.-Cottonwood Point  
Pemiscot County  
Project Number: 2014-06-069  
Installation ID Number: 155-0068  
Permit Number: ________

This sheet covers the period from ________ to ________.

(month, year)  (month, year)

<table>
<thead>
<tr>
<th>Month/Year</th>
<th>Emission Units</th>
<th>1 Month Total PM Emissions</th>
<th>1 Month Total PM Emissions</th>
<th>Previous Month’s 12 Month Total</th>
<th>Previous Year’s 1 month Total</th>
<th>12 month Total PM Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>C2</td>
<td>C3</td>
<td>C4</td>
<td>C5</td>
<td>C6</td>
<td>C7</td>
</tr>
<tr>
<td></td>
<td>Amount of grain (tons) dried</td>
<td>Composite Emission Factor (lbs. PM per tons dried)</td>
<td>Monthly PM Emissions (lbs.)</td>
<td>Monthly PM Emissions (tons)</td>
<td>12 month Rolling Total PM Emissions (tons)</td>
<td>Monthly PM Emissions (tons)</td>
</tr>
<tr>
<td>Example</td>
<td>20,000</td>
<td>0.2219</td>
<td>4,438.0</td>
<td>2.22</td>
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<td>0.2219</td>
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</table>

• Instructions:
  • C2 = the total tons of grain dried during the month and year indicated in C1
  • C3 = 0.1088(lbs./ tons), the composite emission factor for emission units
  • C4 = C2 × C3
  • C5 = C4 × 2000
  • C6 = the 12 month rolling total PM emissions from the previous month (C8 from previous month)
  • C7 = the monthly total PM emissions from the previous year
  • C8 = C5 + C6 – C7  **Note: A value less than 25.0 tons is necessary for continued compliance**
APPENDIX A

Abbreviations and Acronyms

% ........... percent
°F .......... degrees Fahrenheit
acfm .......... actual cubic feet per minute
BACT ....... Best Available Control Technology
BMPs ....... Best Management Practices
Btu ........... British thermal unit
CAM ....... Compliance Assurance Monitoring
CAS .......... Chemical Abstracts Service
CEMS ..... Continuous Emission Monitor System
CFR .......... Code of Federal Regulations
CO .......... carbon monoxide
CO₂ .......... carbon dioxide
CO₂e ....... carbon dioxide equivalent
COMS ..... Continuous Opacity Monitoring System
CSR ....... Code of State Regulations
dscf ....... dry standard cubic feet
EIQ .......... Emission Inventory Questionnaire
EP .......... Emission Point
EPA ....... Environmental Protection Agency
EU .......... Emission Unit
fps .......... feet per second
ft ........... feet
GACT ..... Generally Available Control Technology
GHG ...... Greenhouse Gas
gpm .......... gallons per minute
gr ........... grains
GWP ...... Global Warming Potential
HAP ...... Hazardous Air Pollutant
hr .......... hour
hp .......... horsepower
lb .......... pound
lbs/hr ..... pounds per hour
MACT ...... Maximum Achievable Control Technology
µg/m³ ...... micrograms per cubic meter
m/s .......... meters per second
Mgal ....... 1,000 gallons
MW ........ megawatt
MHDR ....... maximum hourly design rate
MMBtu .... Million British thermal units
MMCF .... million cubic feet
MSDS ..... Material Safety Data Sheet
NAAQS ... National Ambient Air Quality Standards
NESHAPs .......... National Emissions Standards for Hazardous Air Pollutants
NOx .......... nitrogen oxides
NSPS ...... New Source Performance Standards
NSR ........ New Source Review
PM .......... particulate matter
PM₂.₅ ....... particulate matter less than 2.5 microns in aerodynamic diameter
PM₁₀ ........ particulate matter less than 10 microns in aerodynamic diameter
ppm .......... parts per million
PSD .......... Prevention of Significant Deterioration
PTE ....... potential to emit
RACT ...... Reasonable Available Control Technology
RAL ....... Risk Assessment Level
SCC .......... Source Classification Code
scfm .......... standard cubic feet per minute
SIC .......... Standard Industrial Classification
SIP .......... State Implementation Plan
SMAL .... Screening Model Action Levels
SMAL .... Screening Model Action Levels
SOₓ ....... sulfur oxides
SO₂ .......... sulfur dioxide
tph .......... tons per hour
tpy .......... tons per year
VMT .......... vehicle miles traveled
VOC .......... Volatile Organic Compound
Mr. Kurt Hasty  
Regional Operations Manager  
Consolidated Grain & Barge, Co.-Cottonwood Point  
201 North Missouri Street  
Mound City, IL 62693  


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  

Permit Number: