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: 062020-013   Project Number: 2019-05-004
Installation Number: 177-0021

Parent Company: Ray-Carroll County Grain Growers, Inc.
Parent Company Address: 807 Main Street, Richmond, MO 64085
Installation Name: Ray-Carroll County Grain Growers, Inc.
Installation Address: 202 East Main, Hardin, MO 64035
Location Information: Ray County, S33, T52, R26

Application for Authority to Construct was made for:
Removal of mineral oil special condition and repurposed emission points. 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.

______________________________
Director or Designee
Department of Natural Resources

______________________________
June 16, 2020
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 Enforcement and Compliance Section of 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 Enforcement and Compliance Section of the Department’s Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department’s regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department’s 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 source(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 using the contact information below.

Contact Information:
Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:
http://dnr.mo.gov/regions/
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 to 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 (3)(E). “Conditions required by permitting authority.”

Ray-Carroll County Grain Growers, Inc.
Ray County, S33, T52N, R26

1. Superseding Condition
   The conditions of this permit supersede all special conditions found in the previously issued construction permit 092002-003A issued by the Air Pollution Control Program.

2. Annual Emission Limit
   A. Ray-Carroll County Grain Growers, Inc. shall emit less than 15.0 tons of PM10 in any 12-month period from all grain operations at this installation as defined in Table 2 in the Project Description section of this permit. The installation shall include all actual emissions, including all SSM emissions, in the monthly compliance demonstration calculations for these emission units.

   A. Ray-Carroll County Grain Growers, Inc. shall demonstrate compliance with Special Condition 2.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form

3. Capture Device Requirement-Full Enclosure
   A. Ray-Carroll County Grain Growers, Inc. shall control emissions from the grain handling emission point (EP115) by installing total enclosures to capture the PM10 emissions. For this permit, a total enclosure is defined as an enclosure that surrounds the emission point with only openings for material entry and material exit.

   B. For each total enclosure, Ray-Carroll County Grain Growers, Inc. shall do one of the following to ensure capture of particulates:
      1) The enclosed grain handling drop points for EP115 shall be completely enclosed. The enclosures shall be constructed and maintained such that no visible emissions to the atmosphere are allowed to occur from these sources.
SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

2) Ray-Carroll County Grain Growers, Inc. shall conduct a detailed visual inspection of the enclosures once every week to ensure compliance with Special Condition 3.B.1). During months where the rate of the grain received or handled is less than or equal to one ton per year (167 lbs per month), visual inspection may instead be conducted on a monthly basis. A record shall be maintained acknowledging that the enclosures have been inspected.

4. Unpaved Haul Road Control – Watering 50% Efficiency
   A. Ray-Carroll Country Grain Growers, Inc. shall water haul roads listed below whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary.
      1) EP H1 North of the small elevator connecting EP H2 to SE 3rd Street (0.019 miles)
      2) EP H2 North of the small elevator connecting E Main Street to EP H1 (0.019 miles)

   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. Haul Road Control-Chemical Dust Suppressant Usage
   A. Ray-Carroll County Grain Growers, Inc. shall apply a chemical dust suppressant agent to control the emission of PM10 from the fugitive emission sources on the following haul roads. Ray-Carroll County Grain Growers, Inc. shall apply this chemical dust suppressant agent, as necessary, to maintain the high level of PM10 emission control (i.e. 90%) predicted for these sources or whenever conditions exist that would allow the "visible emission" of particulate matter from these sources. This chemical dust suppressant agent shall also be applied whenever conditions exist that would allow visible fugitive emissions from these sources to enter the ambient air beyond the property boundaries.
      1) EP A1 East end of plant connecting Main Street to EP B (0.062 miles)
      2) EP A2 East end of plant connecting MO-10 to EP B (0.062 miles)
      3) EP B East end of plant connecting EP A1 and EP A2 to the inbound scale (0.215 miles)
      4) EP C North of the “new” Elevator connecting the “new” Elevator to the inbound scale (0.055 miles)
      5) EP D Southeast of the main elevator connecting the steel storage silos to the “new” elevator (0.120 miles)
      6) EP F1 Between the “new” and main elevators connecting EP C to the steel storage silos (0.122 miles)
      7) EP G2 South of the small and main elevators connecting SE 3rd Street to the steel storage silos (0.133 miles)
SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

B. The chemical dust suppressant agent shall be applied to the above fugitive emission sources at the manufacturer's recommended application rate (i.e. at least 0.5 gallons per square yard of surface area) for the specific dust control agent (i.e. Magnesium Chloride, Calcium Chloride, AE-P Cutback Asphalt Emulsion or MC-30 Cutback Asphalt) to be used at this site.

C. The installation shall keep the following records, with the plant, for not less than five years and shall make these records available to Department of Natural Resources' personnel upon request:
   1) The estimated surface area of the unpaved haul roads and vehicle traffic areas
   2) The time, date and the approximate amount of material applied for each application of the chemical dust suppressant agent on the above sources

D. Records of breakdowns and repairs for the equipment used to apply the chemical dust suppressant agent.

E. If the installation desires to use an alternate chemical dust suppressant agent, the installation shall submit this request, in writing, to the Air Pollution Control Program's Compliance/Enforcement Section for approval. Upon Air Pollution Control Program approval, this alternate chemical dust suppressant agent shall also be applied to the above fugitive emission sources at the manufacturer's recommended dosage rate for this new material. The installation shall also keep a record of the manufacturer's recommended dosage rate for this new chemical dust control agent with the plant and shall make this information available to Department of Natural Resources' personnel upon request.

F. The installation shall conduct and record the results of periodic visual inspections on the unpaved roads controlled by a chemical dust suppressant agent(s). This visual inspection(s) shall examine and note the condition of the road surface(s) especially for signs of wear (surface potholes, wash-boarding, ruts, etc.) to help determine the effectiveness of the dust control agent(s) being used and when the material needs to be reapplied to maintain the high level of control efficiency predicted for the above sources.

6. Haul Road Control - Paving
   A. Ray-Carroll County Grain Growers, Inc. shall pave, or maintain as paved, the following haul roads with asphalt, concrete, or other materials approved by the Missouri Air Pollution Control Program.
SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

1) EP G1 East of the small elevator connecting SE 3rd Street to EP F2 (0.025 miles)
2) EP F2 South of the main elevator connecting EP G1 to the steel storage silos. (0.099 miles)
3) EP E South of the main elevator from the steel storage silos east to exit on Main Street (0.057 miles)

B. Maintenance and repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.

C. Ray-Carroll County Grain Growers, Inc. shall periodically water, wash, or otherwise clean all of the paved portions of the haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

7. Truck Receiving
A. All truck received at the small grain elevator (EP201A) will be limited to hopper trucks.

B. Record keeping is not needed to demonstrate compliance since an overhead utility currently prevents the facility from receiving grain by a straight truck. However, if this physical obstruction changes, Ray-Carroll shall submit either an amendment or permit request to allow for straight trucks.

8. Record Keeping Requirement
Ray-Carroll County Grain Growers, Inc. shall maintain all records required by this permit for not less than five years and make them available to any Missouri Department of Natural Resources’ personnel upon request.

9. Reporting Requirement
Ray-Carroll County Grain Growers, Inc. shall report to the Air Pollution Control Program’s Compliance/Enforcement Section, by mail at P.O. Box 176, Jefferson City, MO 65102 or by e-mail at AirComplianceReporting@dnr.mo.gov, no later than 10 days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.
REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW
Project Number: 2019-05-004
Installation ID Number: 177-0021
Permit Number: 062020-013

Installation Address: Ray-Carroll County Grain Growers, Inc.
202 East Main
Hardin, MO 64035

Parent Company: Ray-Carroll County Grain Growers, Inc.
807 Main Street
Richmond, MO 64085

Ray County, S33, T52, R26

REVIEW SUMMARY

• Ray-Carroll County Grain Growers, Inc. has applied for authority to eliminate the use of mineral oil and remove repurposed emission points.

• The application was deemed complete on May 2, 2019.

• HAP emissions are not expected from the proposed equipment.

• 40 CFR 60 Subpart DD, "Standards of Performance for Grain Elevators" applies to both truck receiving pits (EP101A & EP101B), the storage bins (EP109) and the grain handling (EP115) emission points, because these emission points are considered part of a grain elevator with a maximum storage capacity greater than 2.5 million bushels of grain. The elevator that begins at the main elevator site and continues through the “new” elevator site meets the definition of a grain terminal elevator as defined as Subpart DD.

• None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.

• Full enclosure is being used to control the PM$_{10}$ emissions from the grain handling equipment in this permit. Haul road watering of 50% efficiency is being used on haul roads EP H1 and EP H2 at the small elevator.

• 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$_{10}$ are conditioned below de minimis levels.

• This installation is located in Ray County, an attainment/unclassifiable 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 as a part of this permit.

• No operating permit is required for this installation.
  
  o PM emissions are at NSR minor source levels, but PM is not used for operating permit applicability.
  
  o The installation is a country grain elevator. Therefore, PTE for operating permit applicability is subject to the November 14, 1995, EPA memo Calculating Potential to Emit (PTE) and Other Guidance for Grain Handling Facilities and the April 2, 1996, Air Pollution Control Program memo Definition of "Country Grain Elevator". Actual PM10 emissions are much less than de minimis, and including 120% of actuals makes the potential emissions for operating permit applicability below de minimis by a wide margin. Also, the installation is not otherwise subject to an NSPS or MACT that requires an operating permit. Therefore, no operating permit is required. As the installation is not a named source, fugitive emissions are not included towards operating permit applicability. Therefore, the PTE for operating permit applicability could be even further reduced. Additionally, the sum of the potential emissions from the Hardin fertilizer plant and the 120% of actuals from the country grain elevators still do not exceed the major source limits for operating permits.

• Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Ray-Carroll County Grain Growers, Inc. operates a fertilizer plant, a main grain elevator, a small grain elevator and a more recent “new” elevator in Hardin, Missouri. The main grain elevator receives grain at a maximum hourly design rate of 712.5 tons by truck. The grain is then stored and loaded out by truck or conveyed to the “new” elevator. The “new” elevator receives grain from the main elevator, can receive a maximum of 1,710 tons of grain per hour by truck, or 855 tons of grain per hour by rail. Grain is received at the small elevator at a maximum hourly design rate of 150 tons by trucks where it is stored and shipped back out by truck.

The following New Source Review permits have been issued to Ray-Carroll County Grain Growers, Inc. from the Air Pollution Control Program.
Table 1: Permit History

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>062019-009</td>
<td>Installation of a new grain elevator</td>
</tr>
<tr>
<td>092002-003A</td>
<td>Update emission points</td>
</tr>
<tr>
<td>032015-011</td>
<td>Installation of new fertilizer terminal</td>
</tr>
<tr>
<td>092002-003</td>
<td>Increase rail loadout capacity</td>
</tr>
<tr>
<td>0597-011</td>
<td>Installation of two new grain receiving pits, a new elevator leg, two new pit drums, and concrete storage.</td>
</tr>
<tr>
<td>0396-017</td>
<td>Installation of a dry bulk fertilizer blending installation</td>
</tr>
<tr>
<td>0395-023</td>
<td>Replacement of a railcar loadout swivel spout</td>
</tr>
<tr>
<td>0694-013</td>
<td>Replacement of grain dryer</td>
</tr>
</tbody>
</table>

PROJECT DESCRIPTION


Additionally, several emission points from the main elevator have been removed from the installation. This includes the rail receiving (EP101C), grain dryer (EP102A/B), dried grain storage (EP110), rail loadout scale (EP111), grain cleaner (EP112), and fines truck loadout (EP114). The fines bin (EP113) has been repurposed at the new elevator in permit 062019-009 and thus will no longer count towards the 15 ton PM$_{10}$ limit associated with the small and main elevators. The transfer to loadout conveyors (EP107) will also not count towards this PM$_{10}$ limit, as it is considered part of the grain handling associated with EP303 permitted under permit 062019-009. Emission point EP115 is being added to the installation to account for the main elevator grain handling emissions. Previously, the only grain handling emissions for the main elevator were being accounted for under the grain cleaner (EP112), but with the removal of this emission point, the grain handling must be accounted for separately.

Ray-Carroll County Grain Growers, Inc. will also be renaming every haul road on site as well as changing their bounds and redirecting which elevator will utilize which road. The updated haul road emissions are reflected in the calculations for this permit, and the new haul road names and MHDRs are listed in Table 2 below.

Below is a list of the emissions points contained within the small and main elevators, including those that are being removed. Rows colored light gray represent emission points that are removed from operation or repurposed and not counted towards the 15 ton PM$_{10}$ limit as stated in this permit.
Table 2: Emission Points

<table>
<thead>
<tr>
<th>Location</th>
<th>Emission Point</th>
<th>Current Permit Name/Description</th>
<th>True MHDR (TPH)</th>
<th>Equivalent Bottlenecked MHDR (TPH)</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main elevator</td>
<td>EP101A</td>
<td>Truck Receiving Pit 1</td>
<td>285</td>
<td>285</td>
<td>10,000 Bushel per hour</td>
</tr>
<tr>
<td>Main elevator</td>
<td>EP101B</td>
<td>Truck Receiving Pit 2</td>
<td>427.5</td>
<td>427.5</td>
<td>15,000 Bushel per hour</td>
</tr>
<tr>
<td>Main elevator</td>
<td>EP101C</td>
<td>Rail Receiving</td>
<td></td>
<td></td>
<td>Permanently Removed From Operation</td>
</tr>
<tr>
<td>Main Elevator</td>
<td>EP102A</td>
<td>Grain dryer - grain processed</td>
<td></td>
<td></td>
<td>Permanently Removed From Operation</td>
</tr>
<tr>
<td>Main Elevator</td>
<td>EP102B</td>
<td>Grain dryer - fuel combustion</td>
<td></td>
<td></td>
<td>Permanently Removed From Operation</td>
</tr>
<tr>
<td>Main Elevator</td>
<td>EP103</td>
<td>Loadout to Truck</td>
<td>150</td>
<td>150</td>
<td>No Longer Using Mineral Oil</td>
</tr>
<tr>
<td>Main Elevator</td>
<td>EP107</td>
<td>Transfer to Loadout Bin (from existing elevator)</td>
<td>Unit combined with EP303 and included under grain handling emissions in permit number 062019-009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Elevator</td>
<td>EP109</td>
<td>Storage Bins</td>
<td>712.5</td>
<td>712.5</td>
<td>No Longer Using Mineral Oil</td>
</tr>
<tr>
<td>Main Elevator</td>
<td>EP110</td>
<td>Dried Grain Storage</td>
<td></td>
<td></td>
<td>Permanently Removed From Operation</td>
</tr>
<tr>
<td>Main Elevator</td>
<td>EP111</td>
<td>Rail Scale</td>
<td></td>
<td></td>
<td>Permanently Removed From Operation</td>
</tr>
<tr>
<td>New Elevator</td>
<td>EP112</td>
<td>Cleaner</td>
<td></td>
<td></td>
<td>Permanently Removed From Operation</td>
</tr>
<tr>
<td>New Elevator</td>
<td>EP113</td>
<td>Fines Bin</td>
<td>42.75</td>
<td>42.75</td>
<td>No longer using mineral oil - Moving to new elevator</td>
</tr>
<tr>
<td>Main Elevator</td>
<td>EP114</td>
<td>Loadout Fines to Truck</td>
<td></td>
<td></td>
<td>Permanently Removed From Operation</td>
</tr>
<tr>
<td>Main Elevator</td>
<td>EP115</td>
<td>Grain Handling</td>
<td>712.5</td>
<td>712.5</td>
<td>Redefined Emission Point</td>
</tr>
<tr>
<td>Small Elevator</td>
<td>EP201A</td>
<td>Small Elevator Receiving Pit (hopper truck)</td>
<td>150</td>
<td>150</td>
<td>No Change</td>
</tr>
<tr>
<td>Small Elevator</td>
<td>EP203</td>
<td>Loadout to Truck at Small Elevator</td>
<td>150</td>
<td>150</td>
<td>No Change</td>
</tr>
<tr>
<td>Small Elevator</td>
<td>EP204</td>
<td>Small Elevator Grain Handling</td>
<td>150</td>
<td>150</td>
<td>No Change</td>
</tr>
<tr>
<td>Small Elevator</td>
<td>EP205</td>
<td>Small elevator storage bins</td>
<td>150</td>
<td>150</td>
<td>No Change</td>
</tr>
<tr>
<td>Small, Main, &amp; New Elevators</td>
<td>EP A1</td>
<td>Unpaved Haul Road</td>
<td>9.7 VMT</td>
<td>9.7 VMT</td>
<td>All Haul Roads Reconsolidated</td>
</tr>
<tr>
<td>Small, Main, &amp; New Elevators</td>
<td>EP A2</td>
<td>Unpaved Haul Road</td>
<td>9.7 VMT</td>
<td>9.7 VMT</td>
<td>All Haul Roads Reconsolidated</td>
</tr>
<tr>
<td>Small, Main, &amp; New Elevators</td>
<td>EP B</td>
<td>Unpaved Haul Road</td>
<td>33.8 VMT</td>
<td>33.8 VMT</td>
<td>All Haul Roads Reconsolidated</td>
</tr>
<tr>
<td>New Elevator</td>
<td>EP C</td>
<td>Unpaved Haul Road</td>
<td>8.6 VMT</td>
<td>8.6 VMT</td>
<td>All Haul Roads Reconsolidated</td>
</tr>
<tr>
<td>Location</td>
<td>Emission Point</td>
<td>Current Permit Name/ Description</td>
<td>True MHDR (TPH)</td>
<td>Equivalent Bottlenecked MHDR (TPH)</td>
<td>Comment</td>
</tr>
<tr>
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</tr>
<tr>
<td>New Elevator</td>
<td>EP D</td>
<td>Unpaved Haul Road</td>
<td>18.9 VMT</td>
<td>18.9 VMT</td>
<td>All Haul Roads Reconsolidated</td>
</tr>
<tr>
<td>Small, Main, &amp; New Elevators</td>
<td>EP E</td>
<td>Paved Haul Road</td>
<td>8.9 VMT</td>
<td>8.9 VMT</td>
<td>All Haul Roads Reconsolidated</td>
</tr>
<tr>
<td>Small &amp; Main Elevators</td>
<td>EP F1</td>
<td>Unpaved Haul Road</td>
<td>8.0 VMT</td>
<td>8.0 VMT</td>
<td>All Haul Roads Reconsolidated</td>
</tr>
<tr>
<td>Small &amp; Main Elevators</td>
<td>EP F2</td>
<td>Paved Haul Road</td>
<td>6.5 VMT</td>
<td>6.5 VMT</td>
<td>All Haul Roads Reconsolidated</td>
</tr>
<tr>
<td>Small &amp; Main Elevators</td>
<td>EP G1</td>
<td>Paved Haul Road</td>
<td>0.02 VMT</td>
<td>0.02 VMT</td>
<td>All Haul Roads Reconsolidated</td>
</tr>
<tr>
<td>Small &amp; Main Elevators</td>
<td>EP G2</td>
<td>Unpaved Haul Road</td>
<td>0.02 VMT</td>
<td>0.02 VMT</td>
<td>All Haul Roads Reconsolidated</td>
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<tr>
<td>Small Elevator</td>
<td>EP H1</td>
<td>Unpaved Haul Road</td>
<td>0.02 VMT</td>
<td>0.02 VMT</td>
<td>All Haul Roads Reconsolidated</td>
</tr>
<tr>
<td>Small Elevator</td>
<td>EP H2</td>
<td>Unpaved Haul Road</td>
<td>0.02 VMT</td>
<td>0.02 VMT</td>
<td>All Haul Roads Reconsolidated</td>
</tr>
</tbody>
</table>

**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 & Processes*, Table 8.9.1-1, May 2003. Emission factors for the unpaved and paved haul roads were taken from AP-42, Section 13.2.2, Miscellaneous Sources, *Unpaved Roads*, November 2006, and Section 13.2.1, Miscellaneous Sources, *Paved Roads*, January 2011, respectively.

Grain handling emissions (EP115) for the main elevator are fully enclosed, but not vented to a baghouse; therefore, EP115 was given a control efficiency of 95% with a capture efficiency of 100%, which corresponds to the range of efficiencies for fully enclosed conveyors given in the *Coal Handling Emissions Evaluation Roundtable (CHEER) Workshop* (May 1996).

Table 3 provides an emissions summary for this project. The existing potential emissions are taken from the most recent permit. The existing actual emissions are taken from the 2018 EIQ. Potential emissions of the application represent the updated emissions of 092002-003A after removing the oiling requirement and updating the equipment and PTE associated with it. Conditioned emissions of the application represent the potential to emit after taking a de minimis limit on PM$_{10}$ for the small and main elevators. New installation conditioned potential emissions represent the updated potential to emit from all of the on-site equipment and operations included in previous permits.
Table 3: Emissions Summary (tpy)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>25.0</td>
<td>158.02</td>
<td>N/D</td>
<td>725.20</td>
<td>48.21</td>
<td>N/D</td>
</tr>
<tr>
<td>PM_{10}</td>
<td>15.0</td>
<td>&lt;45.00(^1)</td>
<td>11.26</td>
<td>225.65</td>
<td>&lt;15.00</td>
<td>&lt;45.00(^1)</td>
</tr>
<tr>
<td>PM_{2.5}</td>
<td>10.0</td>
<td>10.41</td>
<td>2.26</td>
<td>47.55</td>
<td>3.16</td>
<td>N/D</td>
</tr>
<tr>
<td>SO(_x)</td>
<td>40.0</td>
<td>1.07</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/D</td>
</tr>
<tr>
<td>NO(_x)</td>
<td>40.0</td>
<td>11.12</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/D</td>
</tr>
<tr>
<td>VOC</td>
<td>40.0</td>
<td>0.37</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/D</td>
</tr>
<tr>
<td>CO</td>
<td>100.0</td>
<td>5.77</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/D</td>
</tr>
<tr>
<td>GHG (CO(_{2}))</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/D</td>
</tr>
<tr>
<td>GHG (mass)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>HAPs</td>
<td>10.0/25.0</td>
<td>0.80</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/D</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 project emissions of PM_{10} are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Ray-Carroll County Grain Growers, Inc. 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
  - Per 10 CSR 10-6.110(4)(B)2.B(II) and (4)(B)2.C(II) a full EIQ is required for the first full calendar year the equipment (or modifications) approved by this permit are in operation.

- *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

\(^1\) Representative of three different 15 ton limits and not a single 45 ton limit. The other additional limits can be found in Permits #032015-011 and #062019-009.
• Restriction of Emission of Odors, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS


• No MACT Regulations (10 CSR 10-6.075) apply.

• No Emission Standards for Hazardous Air Pollutants (10 CSR 10-6.080) apply.

• Restriction of Emission of Particulate Matter From Industrial Processes, 10 CSR 10-6.400

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 2, 2019, received May 2, 2019, designating Ray-Carroll County Grain Growers, Inc. as the owner and operator of the installation.
## Attachment A – PM\(_{10}\) Compliance Worksheet

Ray-Carroll County Grain Growers, Inc.  
Ray County, S33, T52N, R26  
Project Number: 2019-05-004  
Installation ID Number: 177-0021  
Permit Number: 062020-013

This sheet covers the period from \(\text{month, year}\) to \(\text{month, year}\).

<table>
<thead>
<tr>
<th>Process Description</th>
<th>Emission Point</th>
<th>(a) Monthly Throughput (tons)</th>
<th>(b) Composite Emission Factor (lb/ton)</th>
<th>(c) SSM PM(_{10}) Emissions (lbs)</th>
<th>(d) Monthly PM(_{10}) Emissions (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain Received at Main Elevator</td>
<td>EP-101A, EP-101B</td>
<td></td>
<td>0.0538</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grain Received at Small Elevator</td>
<td>EP-201A</td>
<td></td>
<td>0.0878</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(e) Total Monthly PM\(_{10}\) Emissions (lbs)  
(f) Total Monthly PM\(_{10}\) Emissions (tons)  
(g) 12-Month Rolling PM\(_{10}\) Emissions (h) from Previous Month's Attachment A (tons)  
(h) Total Monthly PM\(_{10}\) Emissions (f) from Previous Year's Attachment A (tons)  
(i) Current 12-Month Rolling PM\(_{10}\) Emissions (tons) (i) = [(f) + (g) – (h)]

(a) Record this month’s throughput.  
(b) Composite Emission Factor is the total emission factor of each process at this installation.  
(c) Startup, shutdown, and malfunction emissions as reported to the Air Pollution Control Program's Compliance/Enforcement section according to the provisions of 10 CSR 10-6.050 for the month  
(d) Multiply the Monthly Throughput (a) by the respective Composite Emission Factor (b).  
(e) Sum each individual Monthly PM\(_{10}\) Emissions.  
(f) Divide the Total Monthly PM\(_{10}\) Emissions (d) by 2,000.  
(g) Record the 12-Month Rolling PM\(_{10}\) Emissions (h) from the Previous Month’s Attachment A.  
(h) Record the Total Monthly PM\(_{10}\) Emissions (e) from the Previous Year’s Attachment A.  
(i) Calculate the Current 12-Month Rolling PM\(_{10}\) Emissions. A total less than 15.0 tons indicates compliance.
APPENDIX A

%......... 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
SDS ......... Safety Data Sheet
SIC ......... Standard Industrial Classification
SIP ......... State Implementation Plan
SMAL ...... Screening Model Action Levels
SOₓ ........ sulfur oxides
SO₂ .......... sulfur dioxide
SSM ........ Startup, Shutdown & Malfunction
tph ......... tons per hour
tpy ......... tons per year
VMT ......... vehicle miles traveled
VOC ......... Volatile Org
June 16, 2020

Tim Phillips
Ray-Carroll County Grain Growers, Inc.
P.O. Box 158
Richmond, MO 64085

RE: New Source Review Permit - Project Number: 2019-05-004

Dear Tim Phillips:

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 and your new source review permit application are 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.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: [http://dnr.mo.gov/regions/](http://dnr.mo.gov/regions/). The online CAV request can be found at [http://dnr.mo.gov/cav/compliance.htm](http://dnr.mo.gov/cav/compliance.htm).

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, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.oa.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Dakota Fox, 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:dfj

Enclosures

c: Kansas City Regional Office
   PAMS File: 2019-05-004

Permit Number: 062020-013