



## 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: **07 2 0 0 8 - 0 0 3** Project Number: 2008-04-048

Parent Company: Ray-Carroll Fuels, LLC

Parent Company Address: P.O. Box 410, Richmond, MO 64085

Installation Name: Ray-Carroll Fuels, LLC

Installation Address: Highway 24 East, Carrollton, MO 64633

Location Information: Carroll County, S35, T53, R23

Application for Authority to Construct was made for:

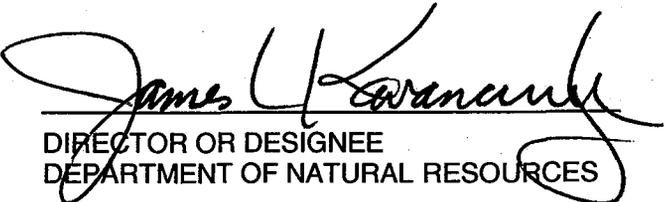
Construction of a card fueling station at the existing grain elevator. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

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

JUL 14 2008

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 departments' Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. 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 this (these) air contaminant source(s).

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 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 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.

STATE OF MISSOURI



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MISSOURI AIR CONSERVATION COMMISSION

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Page No.	3
Permit No.	
Project No.	2008-04-048

**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."*

Ray-Carroll Fuels, LLC  
Carroll County, S35, T53, R23

1. **Superseding Condition**  
The conditions of this permit supersede Special Condition 4.C. found in the previously issued construction permit (Permit Number 042008-004) from the Air Pollution Control Program.
2. **Emission Limitation of Hazardous Air Pollutants (HAPs)**
  - A. Ray-Carroll Fuels, LLC shall emit less than ten (10) tons individually or twenty-five (25) tons combined of Hazardous Air Pollutants (HAPs) from the entire installation in any consecutive 12-month period.
  - B. Attachment A and Attachment B or equivalent forms approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 2(A). Ray-Carroll Fuels, LLC shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include Material Safety Data Sheets (MSDS) for all materials used at this installation, and/or the emission rates used in Attachments A and B shall be determined by performance testing, as detailed in Special Conditions 10 and 11 of Permit #042008-004.
  - C. Ray-Carroll Fuels, LLC shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 2(B) indicate that the source exceeds the limitation of Special Conditions Number 2(A).

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (5) REVIEW

Project Number: 2008-04-048  
Installation ID Number: 033-0023  
Permit Number:

Ray-Carroll Fuels, LLC  
Highway 24 East  
Carrollton, MO 64633

Complete: April 10, 2008  
Reviewed: June 17, 2008

Parent Company:  
Ray-Carroll Fuels, LLC  
P.O. Box 410  
Richmond, MO 64085

Carroll County, S35, T53, R23

REVIEW SUMMARY

- Ray-Carroll Fuels, LLC has applied for authority to construct a card fueling station at the existing grain elevator.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment due to the loading and unloading of gasoline.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment. Subpart Kb of the NSPS only applies to storage tanks with design capacity greater than 19,800 gallons.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of Volatile Organic Compounds (VOC) are below de minimis levels.
- This installation is located in Carroll County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- 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.
- An amended Intermediate Operating Permit application is required for this installation within 90 days of equipment startup.
- Approval of this permit is recommended with special conditions.

## INSTALLATION DESCRIPTION

Ray-Carroll County Grain Growers, Inc. operates a country grain elevator and a fertilizer plant in Carrollton, Missouri. The grain elevator currently receives grain by truck or rail, which is then dried, stored, cleaned, and loaded out by truck or rail. The fertilizer plant receives various types of fertilizer by truck and these fertilizers are mixed and shipped back out by trucks. Although the construction of the current project is associated with Ray-Carroll Fuels, LLC, based on the business relationship between the existing grain elevator and the new fueling station and the location of the new fueling station, Ray-Carroll Fuels, LLC and Ray-Carroll County Grain Growers, Inc. are considered one installation under construction permits. Therefore, both both operations will be referred as Ray-Carroll.

Ray-Carroll was issued a Basic Operating Permit (Project Number 033-0023-020) on November 12, 1998. However, with the issuance of Permit #042008-005, Ray-Carroll is considered an intermediate source and must apply for an Intermediate Operating Permit. The following construction permits have been issued to this installation from the Air Pollution Control Program.

Table 1: Construction permits issued to Ray-Carroll Fuels, LLC

Permit Number	Description
0494-019	Installation of new concrete grain elevator with storage capacity of 780,000 bushels.
0596-014	Installation of a bulk fertilizer mixing plant.
012003-009	Modification of the existing shipping leg and rail loadout system to achieve higher hourly throughput rates at the existing grain elevator and fertilizer plant in Carrollton, Missouri. Ray-Carroll requested a de minimis limitation on their PM <sub>10</sub> emissions from the entire installation.
042008-004	Installation of a 60.5 million gallon per year ethanol production plant
042008-005	Increase in grain production

For permitting purposes, Ray-Carroll was determined to be one (1) installation with Show Me Ethanol during a previous project review. For a detailed description of the review, please refer to Project #2006-11-066. However, for operational clarity at each of the respective plants, Ray-Carroll and Show Me Ethanol received a separate permit. For a detailed description of the construction activities at the ethanol plant, please refer to Project #2006-10-057.

## PROJECT DESCRIPTION

Ray-Carroll is proposing to construct a card fueling station at its existing grain elevator in Carrollton, Missouri. The card fueling station will offer gasoline, diesel and biodiesel. Fuel is expected to be sold to farm customers and local traffic including vehicles associated with the operation of the adjacent ethanol plant. The fueling station will be located at the entrance of the installation on the existing haul road loop.

The fueling station will consist of four (4) 10,000-gallon above-ground bulk storage tanks, one (1) 15,000-gallon above-ground bulk storage tank and fuel dispensers. Fuel will also be dispensed near the storage tanks at the bulk truck loading pump, which will be used solely to pump biodiesel into bulk diesel fuel trucks to generate B2 biodiesel fuel for a local distributor. Table 2 outlines the summary of all the emission points at Ray-Carroll plant. There are no control devices associated with the tanks.

Table 2: Emission Point Summary

Emission Point	Description	Maximum Hourly Design Rate (MHDR)
EP01A	Truck Grain Receiving Pits (2)	560 tons/hr
EP01B	Rail Receiving	280 tons/hr
EP02	Elevator Legs (2)	560 tons/hr
EP04A	Storage	560 tons/hr
EP04B	Temporary Storage	560 tons/hr
EP05	Front End Loader	
EP06	Shipping Leg	840 tons/hr
EP07A	Truck Loading	168 tons/hr
EP07B	Rail Shipping	840 tons/hr
EP09A	36 MMBtu LP Grain Dryer (Process Emissions)	84 tons/hr
EP11	Dry Fertilizer Receiving	100 tons/hr
EP12	Fertilizer Elevator Legs	100 tons/hr
EP14	Fertilizer Loadout	100 tons/hr
	Haul Road - Receiving segment	
EP15	Two (2) diesel tanks	10,000 gallon, each
EP16	Two (2) gasoline tanks	10,000 gallon, each
EP17	One (1) biodiesel tank	15,000 gallon
EP18	Loading losses for gasoline tanks	200 gallons per minute
EP19	Loading losses for diesel tanks	150 gallons per minute
EP20	Loading losses for biodiesel bulk trucks	400 gallons per minute

## EMISSIONS/CONTROLS EVALUATION

Emissions for the diesel and gasoline tanks were calculated using the EPA emissions estimation software, TANKS Version 4.09d for working and breathing losses of the storage tank. Loadout Emissions were determined using the EPA document AP-42, Section 5.2, *Transportation and Marketing of Petroleum Liquids*. As a worst case scenario, loading loss emissions were calculated using gasoline as the displaced vapor. All filling will take place using submerged unloading as indicated in the application.

Potential emissions were calculated assuming the worst case scenario of loading gasoline tanks and continuous operation (i.e. 8760 hours per year). Due to the timing of

this project with the previous projects (Project #2006-10-057 and 2006-11-066), the potential emissions of these projects were combined to determine permit applicability. As a result, VOC and HAP emissions of the entire project will increase due to the construction of the fueling station. VOC potential emissions will increase from 98.7 tons per year to 123.7 tons per year, which will not affect the review of the project since the major threshold for either plant is 250 tons per year (i.e. neither are named sources). However, combined HAP potential emissions will increase to 25.45 tons per year, which is greater than the major threshold for combined HAPs. Therefore, the 10/25 ton per year limit for the entire installation will be amended to include the HAP emissions of the fueling station.

Existing potential emissions of the application represent the potential of the equipment at the Ray-Carroll facility, based on operational hour restrictions and emissions control/reduction equipment set forth in Permit #042008-005. Actual emissions were taken from the installation's 2007 Emissions Inventory Questionnaire (EIQ). The following table provides an emissions summary for this project.

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (2007 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM <sub>10</sub>	15.0	34.3	4.72	N/A	N/A
SO <sub>x</sub>	40.0	3.6	0.56	N/A	N/A
NO <sub>x</sub>	40.0	15.9	0.10	N/A	N/A
VOC	40.0	0.4	N/A	25.0	N/A
CO	100.0	2.7	0.01	N/A	N/A
HAPs	10.0/25.0	0.1	N/A	13.2	<10.0/<25.0

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 VOC are below de minimis levels.

### APPLICABLE REQUIREMENTS

Ray-Carroll Fuels, LLC 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

The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.

- *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 10-3.090

#### 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.

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Emily Wilbur  
Environmental Engineer

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Date

#### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated April 2, 2008, received April 10, 2008, designating Ray-Carroll Fuels, LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Northeast Regional Office Site Survey, dated April 21, 2008.





Mr. Leland Struchtemeyer  
Refined Fuel Manager  
Ray-Carroll Fuels, LLC  
P.O. Box 410  
Richmond, MO 64085

RE: New Source Review Permit - Project Number: 2008-04-048

Dear Mr. Struchtemeyer:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, 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 have any questions regarding this permit, please do not hesitate to contact Emily Wilbur, at the departments' 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

Kendall B. Hale  
New Source Review Unit Chief

KBH:ewl

Enclosures

c: Northeast Regional Office  
PAMS File: 2008-04-048

Permit Number: