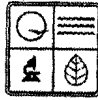


STATE OF MISSOURI

PERMIT BOOK



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:

06 2 0 1 0 - 0 1 1

Project Number: 2010-04-040

Installation ID: PORT-0522

Parent Company:

Richard Mertens, Inc.

Parent Company Address: 20101 Mertens Road, Rt. 1, Box 448, Warrenton, MO 63383

Installation Name:

Richard Mertens, Inc. - Gasconade County Plant

Installation Address:

20101 Mertens Road, Rt. 1, Box 448, Warrenton, MO 63383

Location Information:

Gasconade County, S29, T45N, R5W

Application for Authority to Construct was made for:

The installation of new screen (EP-3C). 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.

JUN 25 2010

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 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 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.

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Permit No.	
Project No.	2010-04-040

**SITE SPECIFIC SPECIAL CONDITIONS:**

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

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*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."*

1. **Superseding Condition**  
The conditions of this permit supersede Site Specific Special Condition 2 found in Permit Number 052005-005 from the Air Pollution Control Program.
2. **Ambient Air Impact Limitation**
  - A. Richard Mertens, Inc. - Gasconade County Plant shall not cause an exceedance of the National Ambient Air Quality Standard (NAAQS) for particulate matter less than ten microns in aerodynamic diameter (PM<sub>10</sub>) of 150.0 µg/m<sup>3</sup> 24-hour average in ambient air.
  - B. Richard Mertens, Inc. - Gasconade County Plant 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. **Concurrent Operation Restriction**  
Richard Mertens, Inc. - Gasconade County Plant is prohibited from operating whenever other plants not owned by Richard Mertens, Inc. are located at the site.
4. **Reporting Requirement**  
Richard Mertens, Inc. - Gasconade County Plant shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedances of the limitations imposed by this permit.

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

Project Number: 2010-04-040  
Installation ID Number: PORT-0522  
Permit Number:

Richard Mertens, Inc. - Gasconade County Plant  
20101 Mertens Road, Rt. 1, Box 448  
Warrenton, MO 63383

Complete: April 15, 2010

Parent Company:  
Richard Mertens, Inc.  
20101 Mertens Road, Rt. 1, Box 448  
Warrenton, MO 63383

Gasconade County, S29, T45N, R5W

PROJECT DESCRIPTION

Rock, composed of non-metallic minerals, is drilled/blasted, loaded into haul trucks, and transported to processing at this installation. Rock is processed through feeder(s), crusher(s), screen(s), conveyor(s), and bin(s). This installation is not on the List of Named Installations per 10 CSR 10-6.020(3)(B), Table 2. The installation is located in Gasconade County, an attainment area for all criteria air pollutants. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.

Richard Mertens, Inc. will be adding a new 200 ton per hour screen to its rock crushing facility (073-0052). The new screen will classify rock based upon size from the primary crusher (EP-3A) then transfer the classified rock to an existing conveyor (EP-3B). This new screen's potential to emit is 1.74 pounds of particulate matter less than ten microns in diameter (PM<sub>10</sub>) per hour, which exceeds the 1.0 pound of PM<sub>10</sub> per hour Insignificant Emission Exemption Levels of Table 1 of 10 CSR 10-6.061(3)(A)3.A., and therefore a permit is required.

TABLES

The following permits have been issued to Richard Mertens, Inc. - Gasconade County Plant from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
0698-007	Section 5 Construction Permit
0698-007B	Relocation
052005-005	New portable rock-crushing plant
OP Project 2007-07-032	Basic Operating Permit

The table below summarizes the emissions of this project. The existing actual emissions were taken from the previous years EIQ. The potential emissions of the application (the new screen, EP-3C) represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year).

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/ SMAL	<sup>1</sup> Existing Potential Emissions	Existing Actual Emissions (2009 EIQ)	Potential Emissions of the Application	<sup>2</sup> Conditioned Potential Emissions of the Application
PM <sub>10</sub>	15.0	65.8	6.42	7.62	0.361
SO <sub>x</sub>	40.0	4.4	N/D	N/A	N/A
NO <sub>x</sub>	40.0	67.0	N/D	N/A	N/A
VOC	40.0	5.5	N/D	N/A	N/A
CO	100.0	14.4	N/D	N/A	N/A
<sup>3</sup> Lead Compounds	0.01	N/D	N/D	N/A	N/A
<sup>3</sup> Formaldehyde	2.0	N/D	N/D	N/A	N/A
Total HAPs	25.0	0.06	N/D	N/A	N/A

N/A = Not Applicable; N/D = Not Determined

<sup>1</sup>Existing Potential Emissions taken from Permit # 052005-005

<sup>2</sup>The conditioned potential emissions of the application is limited by the NAAQS requirements.

<sup>3</sup>Screening Model Action Level (SMAL)

Table 3: Ambient Air Quality Impact Analysis

Pollutant	<sup>1</sup> NAAQS/ RAL (µg/m <sup>3</sup> )	Averaging Time	<sup>2</sup> Maximum Modeled Impact (µg/m <sup>3</sup> )	Limited Impact (µg/m <sup>3</sup> )	Ambient Impact Factor (µg/m <sup>3</sup> ton)	Background (µg/m <sup>3</sup> )	<sup>3</sup> Daily Limit (tons/day)
<sup>4</sup> PM <sub>10</sub> (same)	150.0	24-hour	1,264.24	130.0	0.5719	20.0	371.21

<sup>1</sup>National Ambient Air Quality Standards (NAAQS) and Risk Assessment Level (RAL)

<sup>2</sup>Modeled impact at maximum capacity with controls

<sup>3</sup>Indirect limit based on compliance with NAAQS.

<sup>4</sup>Solitary operation or operation with other plants that are owned by Richard Mertens, Inc.

## EMISSIONS CALCULATIONS

Emissions for the project were calculated using emission factors found in the United States Environmental Protection Agency (EPA) document AP-42 *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition (AP-42).

Emissions from the rock-crushing equipment were calculated using emission factors from AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004. The uncontrolled emission factors were used because the inherent moisture content of the crushed rock is less than 1.5% weight.

## AMBIENT AIR QUALITY IMPACT ANALYSIS

An ambient air quality impact analysis (AAQIA) was performed to determine the impact of the pollutants listed in Table 3. The Air Pollution Control Program requires an AAQIA of PM<sub>10</sub> for all asphalt, concrete and rock-crushing plants regardless of the level of PM<sub>10</sub> emissions if a permit is required. An AAQIA is required for other pollutants if their emissions exceed their respective de minimis or screening model action level (SMAL). The AAQIA was performed using the Air Pollution Control Program's generic nomographs and when appropriate the EPA modeling software SCREEN3. For each pollutant that was modeled, the maximum concentration that occurs at or beyond the site boundary was compared to the National Ambient Air Quality Standard (NAAQS) or Risk Assessment Level (RAL) for the pollutant. If during continuous operation the modeled concentration of a pollutant is greater than the applicable NAAQS or RAL, the plant's production is limited to ensure compliance with the standard. In cases where the plant is providing material for a highway project, the ambient impact is evaluated in accordance with a memorandum issued by the Air Pollution Control Program titled "Permitting Asphalt/Concrete Plants for Temporary Highway Projects," dated April 10, 2000. This memorandum states that air quality should be analyzed at the nearest residence or location where the public could reasonably be expected to be found instead of all ambient air. This practice generally allows for a less restrictive daily production level while protecting the public.

### 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<sub>10</sub> are above the Insignificant Emission Exemption Levels of Table 1 of 10 CSR 10-6.061(3)(A)3.A.

### APPLICABLE REQUIREMENTS

Richard Mertens, Inc. - Gasconade County Plant 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.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Odors*, 10 CSR 10-3.090

## SPECIFIC REQUIREMENTS

- 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to the equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) or National Emission Standards for Hazardous Air Pollutants for Source Categories (MACTS) apply to the proposed equipment.

## 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.

\_\_\_\_\_  
Daronn Williams  
Environmental Engineer

\_\_\_\_\_  
Date

## PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated April 14, 2010, received April 15, 2010, designating Richard Mertens, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- St. Louis Regional Office Site Survey, dated April 20, 2010.

