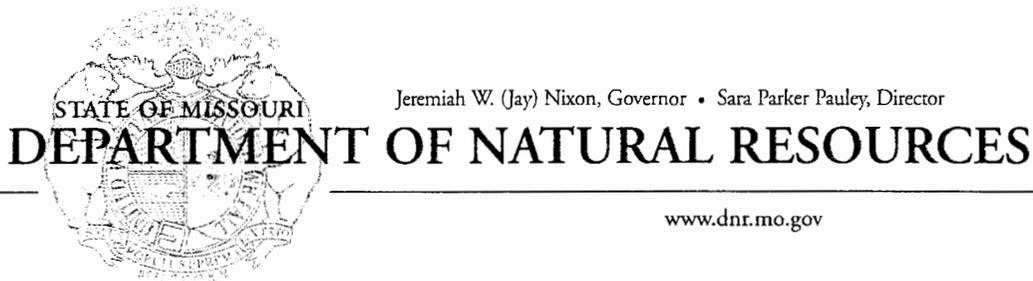


PERMIT BOOK



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## DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

**JUL 26 2014**

Mr. Cary Stewart  
President  
Stewart Brothers Construction Company, LLC  
1106 North Garfield  
West Plains, MO 65775

RE: New Source Review Temporary Permit Request - Project Number: 2014-06-077

Temporary Permit Number: **082014-017**

Expiration Date: November 1, 2014

Dear Mr. Stewart:

The Missouri Department of Natural Resources' Air Pollution Control Program has completed a review of your request to operate an impact crusher and conveyor to crush left over concrete waste from a demolished hotel (formally the Regency Inn and Suites, located at 1301 Preacher Roe Boulevard in West Plains, Missouri). The Air Pollution Control Program is hereby granting your request to conduct this temporary operation at this location in accordance with Missouri State Rule 10 CSR 10-6.060(3). A construction permit is required for this project because the uncontrolled potential particulate matter less than ten microns in aerodynamic diameter (PM<sub>10</sub>) emissions of this project, assuming continuous operation (8760 hours per year) of all equipment and activities, exceed the 15.0 ton per year de minimis level, per 10 CSR 10-6.020(3)(A). Potential emissions of this project are listed in Table 1. An ambient air quality impact analysis was performed to determine the impact of the PM<sub>10</sub> and the results are listed in Table 2.

Stewart Brothers Construction Company, LLC will be using a Metso Compactor and its associated conveyor to crush left over concrete from the demolition of the Regency Inn and Suites. The crusher is rated at 150 tons per hour. The left over concrete waste is in existing stockpiles onsite. The crushed concrete will be stockpiled and then transported via a frontend loader and used as base rock and fill material for this site. The crushed concrete will not be hauled off site. Reinforced steel and all debris have been removed from the concrete.

The equipment will be powered by diesel engines but because they will be on site for less than 12 consecutive months, the engines will meet the definition of a nonroad engine as stated in 40 CFR 89.2. Therefore, the engines were not included in the calculations of this project.

40 CFR 60 (Standards of Performance for New Stationary Sources (NSPS)) Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, does not apply to this plant per §60.670(c)(2) because this portable crushing plant is within the production exemption range.

Table 1: Emissions Summary (tons per year)

Pollutant	<i>De Minimis</i> Level/SMAL	Uncontrolled Potential Emissions <sup>a</sup>	Controlled Potential Emissions <sup>b</sup>	Conditioned Controlled Potential Emissions <sup>c</sup>
PM	25.0	79.44	23.97	14.17
PM <sub>10</sub>	15.0	26.63	10.26	6.09
PM <sub>2.5</sub>	10.0	3.35	2.29	1.35
SO <sub>x</sub>	40.0	N/A	N/A	N/A
NO <sub>x</sub>	40.0	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A

N/A = Not Applicable

<sup>a</sup> Potential emissions of the application without controls

<sup>b</sup> Potential emissions of the application with controls (water spray on crusher and documented watering of vehicular activity areas)

<sup>c</sup> The conditioned potential emissions are based on the use of controls and a voluntary daily production limit to comply with the National Ambient Air Quality Standards (NAAQS) for PM<sub>10</sub>

Table 2: Ambient Air Quality Impact Analysis

Pollutant	NAAQS ( $\mu\text{g}/\text{m}^3$ ) <sup>a</sup>	Averaging Time	Maximum Modeled Impact ( $\mu\text{g}/\text{m}^3$ ) <sup>b</sup>	Limited Impact ( $\mu\text{g}/\text{m}^3$ )	Background ( $\mu\text{g}/\text{m}^3$ )	Daily Limit (tons/day) <sup>c</sup>
PM <sub>10</sub> (Solitary) <sup>d</sup>	150.0	24-hour	278.39	130.0	20.0	2,079

<sup>a</sup> National Ambient Air Quality Standards (NAAQS)

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

<sup>c</sup> Indirect limit based on compliance with the NAAQS

Emissions for the project were calculated using emission factors found in the United States EPA document AP-42 *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition (AP-42). Emissions from the crusher and conveyor were calculated using emission factors from AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004. The controlled emission factors were used because the equipment is control by water spray devices.

Emissions from vehicular activity areas were calculated using the predictive equation from AP-42 Section 13.2.2 "Unpaved Roads," November 2006. A 90% control efficiency for PM and PM<sub>10</sub> and a 40% control efficiency for PM<sub>2.5</sub> were applied to the emission calculations for the use of BMPs. Emissions from load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4. The moisture content of the aggregate is 0.7% by weight. Emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program's Emissions Inventory Questionnaire Form 2.8 "Storage Pile Worksheet."

An ambient air quality impact analysis (AAQIA) was performed to determine the impact of the pollutants listed in Table 2. The Air Pollution Control Program requires an AAQIA of PM<sub>10</sub> for

Mr. Cary Stewart  
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all asphalt, concrete and rock-crushing plants regardless of the level of PM<sub>10</sub> emissions if a permit is required. The AAQIA was performed using the Air Pollution Control Program's generic nomographs and when appropriate the EPA modeling software AERSCREEN. The maximum concentration of PM<sub>10</sub> that occurs at or beyond the site boundary was compared to the NAAQS. If during continuous operation the modeled concentration of a pollutant is greater than the applicable NAAQS, the plant's production is limited to ensure compliance with the standard. This AAQIA also shows that "the attainment and maintenance of ambient air quality standards is not threatened," which is a requirement for a temporary construction permit.

This plant uses BMPs to control emissions from vehicular activity areas, and therefore, these emissions were not included in the AAQIA. Instead they were addressed as a background concentration of 20.0 µg/m<sup>3</sup> of PM<sub>10</sub> in accordance with the Air Pollution Control Program's BMPs interim policy.

You are still obligated to meet all applicable air pollution control rules, Department of Natural Resources' rules, or any other applicable federal, state, or local agency regulations. Specifically, you should avoid violating 10 CSR 10-6.110 *Reporting Emission Data, Emission Fees, and Process Information*, 10 CSR 10-6.045 *Open Burning Requirements*, 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.165 *Restriction of Emission of Odors*, and 10 CSR 10-6.170 *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*.

A copy of this letter should be kept with the unit and be made available to Department of Natural Resources' personnel upon verbal request. If you have any questions regarding this determination, please do not hesitate to contact Daronn A. Williams at the departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or by telephone at (573) 751-4817.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



Kyra L. Moore  
Director

KLM:dwl

c: PAMS File: 2014-06-077  
Southwest Regional Office

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Project No.	2014-06-077

**SITE SPECIFIC 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."*

1. **Best Management Practices Requirement**  
Stewart Brothers Construction Company, LLC shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing BMPs as defined in Attachment AA.
2. **Ambient Air Impact Limitation**
  - A. Stewart Brothers Construction Company, LLC shall not cause an exceedance of the NAAQS for PM<sub>10</sub> of 150.0 µg/m<sup>3</sup> 24-hour average in ambient air.
  - B. Stewart Brothers Construction Company, LLC shall demonstrate compliance with Special Condition 2.A using Attachment A or other equivalent forms that have been approved by the Air Pollution Control Program, including an electronic forms.
3. **Wet Suppression Control System Requirement**
  - A. Stewart Brothers Construction Company, LLC shall install and operate wet spray devices on its Metso concrete impact crusher (EP-1).
  - B. Watering may be suspended during periods of freezing condition, when use of the wet spray devices may damage the equipment. During these conditions, Stewart Brothers Construction Company, LLC shall adjust the production rate to control emissions from these units. Stewart Brothers Construction Company, LLC shall record a brief description of such events.
4. **Minimum Distance to Property Boundary Requirement**  
The primary emission point shall be located at least 100 feet from the nearest property boundary.
5. **Concurrent Operation Restriction**  
Stewart Brothers Construction Company, LLC is prohibited from operating whenever other plants are located at the site.
6. **Primary Equipment Requirement**  
Stewart Brothers Construction Company, LLC shall process all concrete waste through the primary crusher (EP-1). Bypassing the primary crusher is prohibited.

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**SITE SPECIFIC SPECIAL CONDITIONS:**

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

7. **Nonroad Engine Requirement**  
Stewart Brothers Construction Company, LLC's engines shall not remain at one location within this site longer than 12 consecutive months in order for the engines to meet the definition of a nonroad engine as stated in 40 CFR 89.2. These engines shall be moved with its associated equipment at least once every 12 consecutive months at this site.
8. **Record Keeping Requirement**  
Stewart Brothers Construction Company, LLC 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**  
Stewart Brothers Construction Company, LLC shall report to the Air Pollution Control Program's Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after any exceedances of the limitations imposed by this permit.



## **Attachment AA: Best Management Practices**

Haul roads and vehicular activity areas shall be maintained in accordance with at least one of the following options when the plant is operating.

1. **Pavement**
  - A. The operator shall pave the area with materials such as asphalt, concrete or other materials approved by the Air Pollution Control Program. The pavement will be applied in accordance with industry standards to achieve control of fugitive emissions while the plant is operating.
  - 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. The operator shall periodically 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.
  
2. **Application of Chemical Dust Suppressants**
  - A. The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
  - B. The quantities of the chemical dust suppressant shall be applied and maintained in accordance with the manufacturer's recommendation (if available) and in sufficient quantities to achieve control of fugitive emissions from these areas while the plant is operating.
  - C. The operator shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator shall keep these records with the plant for not less than five (5) years and make these records available to Department of Natural Resources' personnel upon request.
  
3. **Application of Water-Documented Daily**
  - A. The operator shall apply water to unpaved areas. Water shall be applied at a rate of 100 gallons per day per 1,000 square feet of unpaved or untreated surface area while the plant is operating.
  - B. Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
  - C. Watering may also 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.
  - D. The operator shall record the date, volume of water application and total surface area of active haul roads or the amount of precipitation that day. The operators shall also record the rationale for not watering (e.g. freezing conditions or not operating).
  - E. The operator shall keep these records with the plant for not less than five (5) years, and the operator shall make these records available to Department of Natural Resources' personnel upon request.