

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:

062011-007

Project Number: 2011-03-051

Installation ID: 161-0064

Parent Company: Havin Material Service, Inc.

Parent Company Address: 527 East Independence Drive, Union, MO 63084

Installation Name: Havin Material Service, Inc.

Installation Address: 13629 Old Highway 66, Saint James, MO 65559

Location Information: Phelps County, S27, T38N, R7W

Application for Authority to Construct was made for:

A new stationary concrete plant that is rated at 120 cubic yards of concrete per hour (approximately 241.44 tons of concrete per hour). 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 15 2011

EFFECTIVE DATE

James Karnau
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.

Page No.	3
Permit No.	
Project No.	2011-03-051

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
Havin Material Service, Inc. shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing Best Management Practices as defined in Attachment AA.
2. Ambient Air Impact Limitation
 - A. Havin Material Service, Inc. shall not cause an exceedance of the National Ambient Air Quality Standard (NAAQS) for particulate matter less than ten microns in aerodynamic diameter (PM₁₀) of 150.0 µg/m³ 24-hour average in ambient air.
 - B. Havin Material Service, 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. Havin Material Service, Inc. shall account for the impacts from other sources of PM₁₀ as instructed in Attachment B and Attachment C.
3. Moisture Content Testing Requirement
 - A. Havin Material Service, Inc. shall verify that the moisture content of the processed rock is greater than or equal to 1.1% weight.
 - B. Testing shall be conducted according to the method prescribed by the American Society for Testing Materials (ASTM) D-2216, C-566 or another method approved by the Director.
 - C. The initial test shall be conducted no later than 45 days after the start of operation. A second test shall be performed the calendar year following the initial test during the months of July or August.
 - D. The test samples shall be taken from rock that has been processed by the plant or from each source of aggregate (e.g. quarry).
 - E. The written analytical report shall include the raw data and moisture content of each sample, the test date and the original signature of the individual performing the test. The report shall be filed on-site or at the Havin Material Service, Inc. main office within 30 days of completion of the required test.

Page No.	4
Permit No.	
Project No.	2011-03-051

SPECIAL CONDITIONS:

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

- F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 3.A, another test may be performed within 15 days of the noncompliant test. If the results of that test also exceed the limit, Havin Material Service, Inc. shall either:
 - 1) Apply for a new permit to account for the revised information, or
 - 2) Submit a plan for the installation of wet spray devices to the Air Pollution Control Program Compliance Assistance section within 10 days of the second noncompliant test. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.

- G. In lieu of testing, Havin Material Service, Inc. may obtain test results that demonstrate compliance with the moisture content in Special Condition 3.A from the supplier of the aggregate.

- 4. Control Device Requirement-Baghouse
 - A. Havin Material Service, Inc. shall control emissions from the equipment listed below using baghouses as specified in the permit application.
 - 1) Cement Silo
 - 2) Supplement Silo
 - 3) Weigh Hopper

 - B. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources employees may easily observe them.

 - C. Replacement filters for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

 - D. Havin Material Service, Inc. shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

 - E. Havin Material Service, Inc. shall maintain an operating and maintenance log for the baghouses and drum filters which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

Page No.	5
Permit No.	
Project No.	2011-03-051

SPECIAL CONDITIONS:

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

5. Minimum Distance to Property Boundary Requirement
The primary emission point shall be located at least 450 feet from the nearest property boundary.
6. Record Keeping Requirement
Havin Material Service, 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.
7. Reporting Requirement
Havin Material Service, Inc. 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: 2011-03-051
Installation ID Number: 161-0064
Permit Number:

Havin Material Service, Inc.
13629 Old Highway 66
Saint James, MO 65559

Complete: March 24, 2011

Parent Company:
Havin Material Service, Inc.
527 East Independence Drive
Union, MO 63084

Phelps County, S27, T38N, R7W

PROJECT DESCRIPTION

Havin Material Service, Inc. has submitted an Application for Authority to Construct for a new stationary concrete plant at 13629 Old Highway 66 in Saint James, Missouri in Phelps County (S27, T38N, R7W). There are no other sources that emit air pollutants at this site. Havin Material Service, Inc. will construct the stationary concrete plant directly behind A & J Auto Sales. The property that will be used by Havin Material Service, Inc. will be leased from A & J Auto Sales.

The maximum hourly design rate of the ready mix concrete plant is rated at 120 cubic yards of concrete per hour, which equates to approximately 241.44 tons of concrete per hour. Emissions from the cement silo, supplement silo, and weigh hopper are controlled by a baghouse. The plant is powered by electricity from the grid. The applicant is using one of the methods described in Attachment AA, "Best Management Practices," to control emissions from haul roads and vehicular activity areas. Havin will use aggregate that has a tested moisture content of 1.1% by weight. This moisture content was used to calculate the emissions of this project.

Havin Material Service, Inc. is located in Phelps 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.

No permits have been issued to Havin Material Service, Inc. from the Air Pollution Control Program.

TABLES

The table below summarizes the emissions of this project. The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year). Conditioned potential emissions are based upon compliance to the NAAQS for PM₁₀.

Table 1: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level	¹ Existing Potential Emissions	Existing Actual Emissions	² Potential Emissions of the Application	Conditioned Potential Emissions
PM ₁₀	15.0	N/A	N/A	54.64	13.91
PM _{2.5}	10.0	N/A	N/A	10.74	2.73
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

¹Existing Potential Emissions not applicable because this is a new installation

²Includes haul road and storage pile emissions with control devices

Table 2: Ambient Air Quality Impact Analysis

Pollutant	¹ NAAQS (µg/m ³)	Averaging Time	² Maximum Modeled Impact (µg/m ³)	Limited Impact (µg/m ³)	Background (µg/m ³)	³ Daily Limit (tons/day)
⁴ PM ₁₀ (same)	150.0	24-hour	797.26	130.0	20.0	1,474.9
⁵ PM ₁₀ (separate)	150.0	24-hour	N/A	100.0	50.0	1,135.1

¹National Ambient Air Quality Standards (NAAQS)

²Modeled impact at maximum capacity with controls

³Indirect limit based on compliance with NAAQS

⁴Solitary operation or operation with other plants that are owned by Havin Material Service, Inc.

⁵Operation with other plants that are not owned by Havin Material Service, 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 concrete batch plant were calculated using emission factors from AP-42 Section 11.12 "Concrete Batching," June 2006. This section cites Equation (1) in Section 13.2.4 "Aggregate Handling and Storage Piles," November 2006 for calculating the emissions from aggregate and sand transfer. The cement and supplement silos are controlled with baghouses, so the controlled emission factors were used. Emissions from the aggregate weigh hopper were calculated using AP-42 Section 13.2.4, Equation (1). These emissions are controlled by a baghouse so a 99% control factor was applied to the calculation. Emissions from mix truck loading are uncontrolled, so the uncontrolled emission factor was used.

Emissions from haul roads and vehicular activity areas were calculated using the predictive equation from AP-42 Section 13.2.2 "Unpaved Roads," November 2006. A 90% control efficiency is applied to the emission calculations for the use of BMPs. Emissions from load-in and 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 1.1% 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."

AMBIENT AIR QUALITY IMPACT ANALYSIS

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 PM₁₀ for all asphalt, concrete and rock-crushing plants regardless of the level of PM₁₀ 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.

This plant uses BMPs to control emissions from haul roads and vehicular activity areas, so emissions from these sources were not included in the AAQIA. Instead they were addressed as a background concentration of 20.0 µg/m³ of PM₁₀ in accordance with the Air Pollution Control Program's BMPs interim policy.

OPERATING SCENARIOS

The plant is permitted to operate with other plants located at the site as long as the NAAQS is not exceeded. The following scenarios explain how Havin Material Service, Inc. shall demonstrate compliance with the NAAQS.

- When Havin Material Service, Inc. operates at this site without other plants, which is referred to as solitary operation, Havin Material Service, Inc. must calculate the daily impact of this concrete plant and limit the total impact below the NAAQS.
- When plants that are owned by Havin Material Service, Inc., which are referred to as same owner plants, are located at the site, Havin Material Service, Inc. must calculate the daily impact of each plant and limit the total impact of all plants below the NAAQS. When this plant operates by itself or with same owner plants, this stationary plant may produce up to 1,474.9 tons of concrete per day. Based upon Section 11.12 of AP-42, this daily production is approximately 733.1 of cubic yards of concrete per day.

- When plants that are not owned by Havin Material Service, Inc., which are referred to as separate owner plants, are located at the site, Havin Material Service, Inc. must account for the impacts of these plants as a background concentration and add it to the total impact of all plants owned by Havin Material Service, Inc. that are operating at the site. This total is limited below the NAAQS. Havin Material Service, Inc. will limit the total impact of all plants they own and operate at the site to 100.0 $\mu\text{g}/\text{m}^3$ when any plants they do not own are located at the site. Havin Material Service, Inc. is not permitted to operate with any plant that is not owned by Havin Material Service, Inc. that has a separate owner background greater than 30.0 $\mu\text{g}/\text{m}^3$. When this plant operates with separate owner plants, this stationary plant may produce up to 1,135.1 tons of concrete per day. Based upon Section 11.12 of AP-42, this daily production is approximately 564.2 cubic yards of concrete per day.

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_{10} and $\text{PM}_{2.5}$ are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Havin Material Service, 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. 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 on April 1 for paper submittals or May 1 for MOEIS submittals for the previous year's emissions. Payment of emission fee is required by June 1.
- No Operating Permit is required for this installation.
- *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

SPECIFIC REQUIREMENTS

- None of the New Source Performance Standards (NSPS) apply to the installation.
- 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.
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260

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 A. Williams
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 14, 2011, received March 17, 2011, designating Havin Material Service, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southeast Regional Office Site Survey, dated March 30, 2011.

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 portable 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 emissions¹ 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.

¹For purposes of this document, Control of Fugitive Emissions means to control particulate matter that is not collected by a capture system and visible emissions to the extent necessary to prevent violations of the air pollution law or regulation. (Note: control of visible emission is not the only factor to consider in protection of ambient air quality.)

Ms. Lyn Havin Schulte
President
Havin Material Service, Inc.
527 East Independence Drive
Union, MO 63084

RE: New Source Review Permit - Project Number: 2011-03-051

Dear Ms. Havin Schulte:

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 and your new source review 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 Daronn A. Williams, at the Department's 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:dwl

Enclosures

c: Southeast Regional Office
PAMS File: 2011-03-051

Permit Number: