13 November 2013

Mr. Robert Pezza, President
Material Sand & Stone Corporation
618 Greenville Road
North Smithfield, RI 02896

Dear Mr. Pezza:

The Department of Environmental Management, Office of Air Resources has reviewed and approved your application for the installation of a batch mix asphalt plant to be located at 618 Greenville Road, North Smithfield, RI.

Enclosed is a minor source permit issued pursuant to our review of your application (Approval Nos. 2237 & 2238).

This permit application did not include vendor specific information. Prior to installation of the batch mix asphalt plant, Material Sand & Stone Corporation shall submit to the Office of Air Resources, in writing, the specifications of the selected batch mix plant and dust collector. If the specifications differ from the permit application, a revision to the permit conditions and emission limitations of this permit may be necessary prior to installation of the equipment.

If there are any questions concerning this permit, please contact me at 401-222-2808, extension 7430.

Sincerely,

Darren J. Austin
Air Quality Specialist
Office of Air Resources

cc: North Smithfield Building Official
Christine Gibbons, Engineering Technologies Group, Inc.

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**
**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
**OFFICE OF AIR RESOURCES**

# MINOR SOURCE PERMIT

MATERIAL SAND & STONE CORPORATION

**APPROVAL NOS. 2237 & 2238**

**Pursuant to the provisions of Air Pollution Control Regulation No. 9, this minor source permit is issued to:**

*Material Sand and Stone Corporation*

**For the following:**

*Installation of a 180 tph (manufacturer TBD) batch mix asphalt plant (Approval No. 2237) including a dryer, silos, conveyors, and bins. Particulate emissions generated from the dryer will be controlled by a primary collector followed by a 43,335 cfm, reverse jet dust collector (manufacturer TBD)(Approval No. 2238)). The rotary dryer shall be fired with No. 2 fuel oil containing 0.0015% sulfur by weight or less.*

**Located at:** *618 Greenville Road, North Smithfield*

**This permit shall be effective from the date of its issuance and shall remain in effect until revoked by or surrendered to the Department. This permit does not relieve** *Material Sand & Stone Corporation* **from compliance with applicable state and federal air pollution control rules and regulations. The design, construction and operation of this equipment shall be subject to the attached permit conditions and emission limitations.**

**Douglas L. McVay, Chief**
**Office of Air Resources**

**Date of issuance**

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**
**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
**OFFICE OF AIR RESOURCES**

Permit Conditions and Emission Limitations

**MATERIAL SAND & STONE, INC.**

**APPROVAL NOs. 2237 & 2238**

A. Emission Limitations

1. Asphalt Plant

a. Particulate Matter

(1) The concentration of particulate matter discharged to the atmosphere from the baghouse stack shall not exceed 0.01 grains per dry standard cubic foot.

(2) The emission rate of particulate matter discharged to the atmosphere from the baghouse stack shall not exceed 2.05 lbs per hour.

b. Opacity

Visible emissions from the baghouse stack shall not exceed 10 percent opacity (six-minute average).

c. Nitrogen Oxides ($NO_x$)

(1) The concentration of nitrogen oxides discharged from the rotary dryer shall not exceed 81 ppmv, corrected to 7 percent $O_2$ (1-hour average).

(2) The emission rate of nitrogen oxides discharged from the rotary dryer shall not exceed 7.4 lbs per hour.

d. Carbon Monoxide (CO)

(1) The concentration of carbon monoxide discharged from the rotary dryer shall not exceed 299 ppmv, corrected to 7 percent $O_2$ (1-hour average).

(2) The emission rate of carbon monoxide discharged from the rotary dryer shall not exceed 16.5 lbs per hour.

e. Sulfur Dioxide ($SO_2$)

(1) All No. 2 fuel oil burned in the batch mix plant shall not exceed 0.0015% sulfur by weight.

(2) The emission rate of $SO_2$ discharged from the rotary dryer shall not exceed 0.085 lbs/hr.

B. Operating Requirements

1. The production rate of the batch mix plant shall not exceed 180 tons per hour.

2. The quantity of asphalt produced from the batch mix plant shall be limited to 200,000 tons or less for any consecutive 12-month period.

3. Particulate emissions generated from the dryer shall be captured, contained, and routed to the baghouse for treatment prior to discharge to the atmosphere.

4. All reasonable precautions shall be taken to prevent visible, fugitive emissions from any of the equipment.

C. Monitoring

1. The pressure drop across the baghouse shall be monitored continuously. Pressure drop shall be checked a minimum of once per day, and the date, time, and measurement shall be recorded.

2. A Visolite or similar leak detection test shall be conducted prior to the initial startup and operation, when plant operations are resumed after winter shutdown and every 90 days during the operating season.

D. Emission Testing

1. Initial Performance Test

a. The owner/operator shall conduct emission testing of the equipment to demonstrate compliance with the emission limitations for particulate matter, nitrogen oxides, carbon monoxide, volatile organic compounds and opacity. Testing shall be conducted within 60 days after achieving the maximum operating rate, but no later than 180 days after initial startup.

b. An emission testing protocol shall be submitted to the Office of Air Resources for review at least 60 days prior to the performance of any compliance tests. The owner/operator shall provide the Office of Air Resources at least 60 days prior notice of any compliance test.

c. Emission testing shall be performed in accordance with procedures specified in 40 CFR 60, Appendix A, unless other test methods are prescribed by RIDEM.

d. The owner/operator shall install any and all test ports or platforms necessary to conduct the required testing, provide safe access to any platforms and provide the necessary utilities for sampling and testing equipment.

e. All testing shall be conducted under operating conditions deemed acceptable and representative for the purpose of assessing compliance with the applicable emission limitations.

f. A final report of the results of any compliance testing shall be submitted to the Office of Air Resources no later than 60 days following completion of testing.

g. All stack testing must be observed by the Office of Resources or its authorized representatives to be considered acceptable, unless the Office of Air Resources provides authorization to the owner/operator to conduct the stack testing without an observer present.

2. Annual Testing

a. The burner for the rotary dryer shall be serviced and tested at least once per year. The testing shall include measurements of nitrogen oxides and carbon monoxide emissions.

b. The owner/operator shall provide the Office of Air Resources at least 30 days prior notice of the annual testing.

c. All testing shall be conducted under operating conditions deemed acceptable and representative for the purpose of assessing compliance with the applicable emission limitations.

d. A final report of the results of the servicing and testing shall be prepared and shall include the following information:

(1) Plant data including name, address, plant capacity (tph), normal production rate (tph) and burner model.

(2) Fuel data including fuel type, sulfur content and heating value (BTU/gal or BTU/$ft^3$).

(3) Test conditions including fuel flow, fuel pressure, production rate (tph), material moisture (%), mix temperature, stack temperature, stack flow (acfm) and ambient temperature.

(4) Emissions measurements including oxygen (%), carbon monoxide (ppmv) and nitrogen oxides (ppmv).

(5) Calculated data including carbon monoxide (ppmv corrected to 7% $O_2$), nitrogen oxides (ppmv corrected to 7% $O_2$) and fuel consumption (gal or $ft^3$ per ton of asphalt produced).

(6) Test date, tester name and make and model of instrument used to measure emissions.

e. The report of the results of the servicing and testing shall be maintained onsite for a minimum of five (5) years after the date of the test and shall be made available to representatives of the Office of Air Resources upon request.

E. Fuel Oil Testing

1. Compliance with fuel oil sulfur limits may be determined based on a certification from the fuel supplier. Fuel supplier certification shall include the following information:

a. The name of the fuel supplier;

b. The sulfur content of the fuel from which the shipment came or of the shipment itself;

c. The location of the oil when the sample was drawn for analysis to determine the sulfur content of the fuel, specifically including whether the fuel was sampled as delivered to Material Sand & Stone Corporation or whether the sample was drawn from fuel storage at the fuel supplier's facility or another location; and

d. The method used to determine the sulfur content of the fuel.

2. As an alternative to fuel supplier certification, the owner/operator may elect to sample the fuel prior to combustion. Sampling and analysis shall be conducted for the fuel in the initial tank(s) of fuel to be fired in each fuel burning device and after each new shipment of fuel is received. Samples shall be collected from the fuel tank immediately after the fuel tank is filled and before any fuel is combusted.

3. Each fuel supplier certification or each fuel oil analysis must demonstrate that the oil contains 0.0015 percent sulfur by weight or less.

F. Record Keeping and Reporting

1. The owner/operator shall, on a monthly basis, no later than 15 days after the first of the month, determine the quantity of asphalt produced from the batch mix plant

for the previous 12 months. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.

2. The owner/operator shall notify the Office of Air Resources in writing, no later than 30 days after the first of the month, whenever the total quantity of asphalt produced from the batch mix plant exceeds 200,000 tons in any consecutive 12-month period.

3. The owner/operator shall retain copies of all fuel supplier certifications or fuel oil analysis for each calendar quarter. These records shall be made accessible for review by the Office of Air Resources or EPA. This quarterly record shall include a certified statement, signed by the owner/operator, that the records of fuel supplier certifications submitted represent all of the fuel combusted during the quarter.

4. The owner/operator shall notify the Office of Air Resources in writing of the date the batch mix plant began operation, no later than fifteen (15) days after such date.

5. The owner/operator shall maintain records of the daily pressure drop measurement of the baghouse.

6. The owner/operator shall notify the Office of Air Resources of any anticipated noncompliance with the terms of this permit or any other applicable air pollution control rules and regulations.

7. The owner/operator shall notify the Office of Air Resources in writing of any planned physical or operational change to any equipment that would:

   a. Change the representation of the facility in the application.

   b. Alter the applicability of any state or federal air pollution rules or regulations.

   c. Result in the violation of any terms or conditions of this permit.

   d. Qualify as a modification under APC Regulation No. 9.

   Such notification shall include:

   - Information describing the nature of the change.

   - Information describing the effect of the change on the emission of any air contaminant.

   - The scheduled completion date of the planned change.

Any such change shall be consistent with the appropriate regulation and have the prior approval of the Director.

8. The owner/operator shall notify the Office of Air Resources, in writing, of any noncompliance with the terms of this permit within 30 calendar days of becoming aware of such occurrence and supply the Director with the following information:

   a. The name and location of the facility;

   b. The subject source(s) that caused the noncompliance with the permit term;

   c. The time and date of first observation of the incident of noncompliance;

   d. The cause and expected duration of the incident of noncompliance;

   e. The estimated rate of emissions (expressed in lbs/hr or lbs/day) during the incident and the operating data and calculations used in estimating the emission rate;

   f. The proposed corrective actions and schedule to correct the conditions causing the incidence of noncompliance.

9. All records in this permit shall be maintained for a minimum of five (5) years after the date of each record and shall be made available to representatives of the Office of Air Resources upon request.

G. Fugitive Dust

1. Vehicles transporting aggregate offsite shall be covered with tarpaulin or similar dust resistant membrane.

2. Vehicle operating speeds shall be controlled to minimize generation of dust.

3. Areas within the asphalt and cement production facilities are to be paved with asphalt or RAP.

4. Areas within the asphalt and cement production facilities shall be maintained and controlled in such a manner as to minimize the potential for the generation of fugitive dust emissions.

5. Stockpiles of aggregate within the asphalt and cement production areas are to be formed upwind of operations whenever possible with fine aggregate piles protected from wind erosion by stone stock piles.

6. All open storage areas and/or piles of soil aggregate or any other material which may produce fugitive dust within the asphalt or cement production areas shall be covered or watered down as necessary to prevent generation of dust.

7. All reasonable precautions shall be taken to prevent fugitive dust emissions from the storage, handling or transporting of aggregate or any other dust producing material.

H. Other Permit Conditions

1. To the extent consistent with the requirements of this permit and applicable federal and state laws, the facility shall be designed, constructed and operated in accordance with the representation of the facility in the permit application.

2. Employees of the Office of Air Resources and its authorized representatives shall be allowed to enter the facility at all times for the purpose of inspecting any air pollution source, investigating any condition it believes may be causing air pollution or examining any records required to be maintained by the Office of Air Resources.

3. There shall be no bypassing of the air pollution control equipment at any time.

4. At all times, including periods of startup, shutdown and malfunction, the owner/operator shall, to the extent practicable, maintain and operate the facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Office of Air Resources which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source.

I. Malfunctions

1. A malfunction of any air pollution control system that would result in the exceedance of any emission limitation applicable to this facility will necessitate the shutdown of the facility. The facility must remain shutdown until the malfunction has been identified and corrected.

2. The owner/operator may seek to establish that a malfunction of any air pollution control system that would result in noncompliance with any of the terms of this permit or any other applicable air pollution control rules and regulations was due to unavoidable increases in emissions attributable to the malfunction. To do so, the owner/operator must demonstrate to the Office of Air Resources that:

a. The malfunction was not attributable to improperly designed air pollution control equipment, lack of preventative maintenance, careless or improper operation, or operator error;

b. The malfunction was not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

c. Repairs were performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such repairs were completed as expeditiously as practicable.

d. All possible steps were taken to minimize emissions during the period of time that the repairs were performed.

e. Emissions during the period of time that the repairs were performed will not:

(1) Cause an increase in the ground level ambient concentration at or beyond the property line in excess of that allowed by Air Pollution Control Regulation No. 22 and any Calculated Acceptable Ambient Levels; and

(2) Cause or contribute to air pollution in violation of any applicable state or national ambient air quality standard.

f. The reasons that it would be impossible or impractical to cease the source operation during said period.

g. The owner/operator's actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence.

This demonstration must be provided to the Office of Air Resources, in writing, within two working days of the time when the malfunction occurred and contain a description of the malfunction, any steps taken to minimize emissions and corrective actions taken.

The owner/operator shall have the burden of proof in seeking to establish that noncompliance was due to unavoidable increases in emissions attributable to the malfunction.