S&B Industrial Minerals, North America, Inc.

Facility ID No. 0610002
Indian River County

Air Operation Permit Renewal

Permit No. 0610002-007-AO
Renewal of Air Operation Permit No. 0610002-006-AO

Permitting and Compliance Authority:

State of Florida
Department of Environmental Protection
Air Resource Management, Southeast District

400 North Congress Ave. 3rd Floor
West Palm Beach, Florida 33401-2913

Telephone: (561) 681-6600
Fax: (561) 681-6655

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Title V Air Operation Permit Renewal
Permit No. 0610002-007-AO

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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHEAST DISTRICT OFFICE
400 NORTH CONGRESS AVENUE 3RD FLOOR
WEST PALM BEACH, FLORIDA 33401-2913

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

PERMITTEE:
S & B Industrial Minerals North America, Inc.
225 New Castle Street
Brunswick, Georgia 31520

Permit No.: 0610002-007-AO
Facility Id No. 0610002
Plant Name: Vero Beach Facility
Project: Air Operation Permit Renewal

The purpose of this permit is to renew the Air Operation Permit for the above referenced facility. The existing S & B Industrial Minerals North America Inc. Vero Beach Facility is located in Indian River County at 3505 65th Street in Vero Beach, Indian River County, Florida. Latitude is: 27° 42′ 41″ North; and, Longitude is: 80° 25′ 17″ West.

STATEMENT OF BASIS: This air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.) and Florida Administrative Code (F.A.C.) Chapters 62-4 and 62-210. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:
Appendix A, Abbreviations, Acronyms, Citations and Identification Numbers
Appendix G, General Conditions
Appendix SS, Stack Sampling Facilities
40 CFR 60 subpart UUU

Effective Date: Date
Renewal Application Due Date: Expiration date - 60 days
Expiration Date: Effective Date Plus 5 years -1day

_____ _____
Jill S. Creech, P.E. Date
Southeast District Director

JSC/JKS/JL /lh /sdt

SECTION I. FACILITY INFORMATION.

Subsection A. Facility and Project Description.

The S & B Minerals North America Inc., Vero Beach Facility is a perlite expansion operation with two production lines. Perlite ore is off-loaded by conveyor belt from rail cars and then elevated into one of three silos. The silos feed the two expansion furnaces that expand the perlite. The expanded perlite is separated by cyclone classifiers and packed into bags. Exhausts are passed through a baghouse to remove particulates. Removed particulates are bagged for transport offsite for disposal or reuse.

EU002, Perlite Processing Furnace #2 is a 5.1 MMBtu/hr expansion furnace, permitted to burn natural gas, propane, or biodiesel fuel. The maximum process rate for Perlite Processing Furnace #2 is 1.0 ton of product per hour. Emissions are controlled with a Mikro-Pulsair Model 144S-8-20 baghouse with 144 Nomex bags, an air-to-cloth ratio of 5.5 to 1, and a particulate reduction efficiency of approximately 99.9 percent.

EU003, Perlite Processing Furnace #3 is a 7.4 MMBtu/hr expansion furnace, permitted to burn natural gas, propane, or biodiesel fuel. The maximum process rate for Perlite Processing Furnace #2 is 2.0 ton of product per hour. Emissions are controlled with an Incon Baghouse with 144 Nomex bags and an air to cloth ratio of 4.1 to 1.

Subsection B. Summary of Emissions Units.

EU No.	Brief Description
Regulated Emissions Units	
002	Perlite Processing Furnace #2: 5.1 MMBtu/hr producing 1.0 ton product per hour
003	Perlite Processing Furnace #3: 7.4 MMBtu/hr producing 2.0 ton product per hour

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents

The document(s) listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are on file with the permitting authority:
Permit Application received April 29, 2013

Subsection D. Applicable Regulations.

Based on the permit application received April 29, 2013, this facility is not a major source of hazardous air pollutants (HAPs).

A summary of applicable regulations is shown below.

State Regulations

Chapter 62-4, F.A.C.

Chapter 62-204, F.A.C.

Chapter 62-210, F.A.C.

Chapter 62-296, F.A.C.

Chapter 62-297, F.A.C.

The following conditions apply facility-wide to all emission units and activities:

FW1. Appendices. The permittee shall comply with all documents identified in Section IV, Appendices, listed in the Table of Contents. Each document is an enforceable part of this permit unless otherwise indicated.

Emissions and Controls

FW2. Not federally Enforceable. Objectionable Odor Prohibited. No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rule 62-296.320(2) and 62-210.200(Definitions), F.A.C.]

FW3. General Visible Emissions. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]

FW4. Unconfined Particulate Matter. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility shall include:

a. Paving and maintenance of roads, parking areas and yards;
b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing;
c. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities;
d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
e. Landscaping or planting of vegetation;
f. use of hoods, fans, filter, and similar equipment to contain, capture and/or vent particulate matter;
g. Confining abrasive blasting where possible;
h. Enclosing or covering conveyor systems;

In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice. [Rule 62-96.320(4)(c), F.A.C.]

FW5. Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standards contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests that identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

FW6. Asbestos. This permit does not authorize any demolition or renovation of the facility or its parts of components which involves asbestos removal. This permit does not constitute a waiver of any of the requirements of Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, National Emission Standard for

Asbestos, adopted and incorporated by reference in Rule 62-204.800, F.A.C. Compliance with Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, Section 61.145, is required for any asbestos demolition or renovation at the source. [40 CFR 61; Rule 62-204.800, F.A.C.; and Chapter 62-257, F.A.C.]

FW7. Sixty days prior to the expiration date of this operation permit, the Permittee shall submit two permit renewal applications using the current version of the renewal form along with the processing fee established in Rule 62-4.050(4), F.A.C., to the Southeast District office of the Department. [Rule 62-4.090, F.A.C.] Permit forms can be found online or submitted electronically at http://www.dep.state.fl.us/air/rules/forms/application.htm

FW8. The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Southeast District office:

Department of Environmental Protection
Southeast District Office
400 North Congress Avenue, 3rd Floor
West Palm Beach, Florida 33401
Telephone: (561) 681-6600; Fax: (56) 681-6655

Notification of compliance testing may be submitted by electronic mail to joe.lurix@dep.state.fl.us, or as specified by the District office.

Subsection A. Emissions Units 002 and 003

The specific conditions in this section apply to the following emissions units:

EU No.	Brief Description
002	Perlite Processing Furnace #2: 5.1 MMBtu/hr producing 1.0 ton product per hour
003	Perlite Processing Furnace #3: 7.4 MMBtu/hr producing 2.0 ton product per hour

EU 002 - Perlite Processing Furnace #2. The maximum process rate is 1.0 ton of product per hour. Emissions are controlled with a Mikro-Pulsair Model 144S-8-20 baghouse with 144 Nomex bags, an air-to-cloth ratio of 5.5 to 1, and a particulate reduction efficiency of approximately 99.9 percent.

EU 003 - Perlite Processing Furnace #3. The maximum process rate is 2.0 ton of product per hour. Emissions are controlled with an Incon Baghouse with 144 Nomex bags and an air to cloth ratio of 4.1 to 1.

These emissions units are regulated in accordance with Rule 62-204.800(8)(b)72, F.A.C., that incorporates 40 CFR 60 subpart UUU, Standards of Performance for Calciners and Dryers in Mineral Industries. This subpart establishes standards for particulate matter (PM), 0.04 gr/dscf; and visible emissions (VE), 10% opacity. These emissions units are also subject to the requirements of Rule 62-296.320, F.A.C., (General Pollutant Emission Limiting Standards) including the process weight table. However, the more stringent requirements of subpart UUU are applicable, including the PM limit of 0.04 gr/dscf and a 10% opacity limit. The facility is subject to an alternate opacity limit of 5% allowed by Rule 62-297.620, F.A.C., as an alternate standard demonstrating compliance with the PM emissions limit.

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The maximum allowable heat input rate is as follows:

EU No.	MMBtu/hr Heat Input	Fuel Type
002	5.1	Natural Gas, Propane, or Biodiesel
003	7.4	Natural Gas, Propane, or Biodiesel

The maximum permitted firing rate for both furnaces combined is 924,000 gallons of propane per consecutive 12 months, 84.2 million cubic feet of natural gas per consecutive 12 months, or a combined prorated total heat input equivalent not to exceed 83,622 MMBTU per consecutive 12 months based on an average heating value for propane of 90,500 BTU per gallon. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

A.2. Methods of Operation. (*Fuels).* The fuels that are allowed to be burned in these units are Natural Gas, Propane, or Biodiesel. [Permit No. 0610002-006-AO]

A.3. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C]

A.4. Circumvention. No person shall circumvent any pollution control device or allow the emissions of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

Emission Limitations and Standards

A.5. The emissions units are subject to Rule 62-296.320(4)(a)2., Process Weight Table 296.320-1, F.A.C. For process weight rates up to 30 tons per hour, P_1, the respective allowable emission rate, E_1, in pounds per hour is given below:

$$E_1 = 3.59(P_1)^{0.62}$$

a. The maximum process weight for EU002 is 1.0 ton per hour resulting in an allowable particulate emissions rate of 3.59 pounds per hour or 15.72 tons per any consecutive 12-month period.

b. The maximum process weight for EU003 is 2.0 tons per hour resulting in an allowable particulate emissions rate of 5.52 pounds per hour or 24.17 tons per any consecutive 12-month period.

A.6. Visible Emissions. Visible emissions shall not exceed 5% opacity. This is an alternative to the limit of 10% established by 40 CFR 60.732. [40 CFR 60.732; Rules 62-204.800(8)(b)72 and 62-297.620, F.A.C.]

*{Permit Note: Compliance with the above opacity limit will demonstrate compliance with the particulate matter standard of Specific Condition **A.5** per Rule 62-297.620, F.A.C. However, if this opacity limit is exceeded, the permittee has 45 days to established compliance with the particulate matter limit, per Specific Condition **A.12**.}*

Excess Emissions

A.7. Excess Emissions Allowed. Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

A.8. Excess Emissions Prohibited. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(1), F.A.C.]

Test Methods and Procedures

A.9. Test Methods. Required tests shall be performed in accordance with the following reference methods:

Method	Description of Method and Comments
5	Method for Determining Particulate Matter Emissions (All PM is assumed to be PM_{10}.)
9	Visual Determination of the Opacity of Emissions from Stationary Sources

[The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [62-297.401, F.A.C., AC No. 0850002-AC]

A.10. Annual Compliance Tests.

a. Testing. During each federal fiscal year (October 1 to September 30), the emissions units shall be tested to demonstrate compliance with the emissions standards. Visible emissions tests are required to show compliance with the standards of the Department. The test results must provide reasonable assurance that the emissions units are capable of compliance at the permitted maximum operating rate. The visible emissions tests shall be conducted in accordance with EPA Method 9 for 30 minutes. The Department shall be notified at least 15 days prior to testing to allow witnessing. Results shall be submitted to the Department within 45 days after testing. Notification of compliance testing and completed test reports may be submitted by electronic mail to joe.lurix@dep.state.fl.us. [Rules 62-4.070, 62-297.310(4 & 8), and 62-297.401(9), F.A.C.]

{Permit Note: EU002 is currently in long term shutdown. If the unit is restarted, the facility shall conduct a compliance test on the unit within 30 days of startup. The Department shall be notified at least 15 days prior to testing to allow witnessing. Results shall be submitted to the Department within 45 days.}

b. Test Reports. The test reports shall comply with applicable portions of Rule 62-297.310(8), F.A.C., Test Reports. The Department can require special compliance tests in accordance with Rule 62-297.310(7), F.A.C. Other test methods and alternate compliance procedures may be used only after prior Departmental approval has been obtained in writing. [Rules 62-297.310(7) and 62-297.620(1), F.A.C.]

c. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90-100% of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emission unit may be tested at

less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110% of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for purpose of additional compliance testing to regain the authority to operate at the permitted capacity, with prior notification to the Department. [Rules 62-297.310(2) and 62-4.070, F.A.C.]

A.11. Determination of Process Variables.

a. Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

b. Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

A.12. PM Test Waiver. Rule 62-297.620(4), F.A.C., allows the waiver of PM compliance test requirements for an emission unit that has the potential to emit less than 100 tons per year of particulate matter and is equipped with a baghouse. If the Department has reason to believe that the particulate weight emission standard applicable to such emission unit is not being met, it shall require that compliance be demonstrated by the applicable test method. Compliance with the PM emission limit shall be demonstrated by demonstration of compliance with the opacity standard of 5%. If compliance is not satisfactorily demonstrated, an EPA Method 5 test shall be conducted within 45 days of the visible emissions test. The Method 5 test shall consist of three test runs with a sampling time and volume for each test run of at least two hours and 1.7 dscm. [Rule 62-297.620(4), F.A.C.]

Recordkeeping and Reporting Requirements

A.13. In order to provide information to document compliance with the fuel heat input rate limitations of specific condition **A.1**., the permittee shall monitor and maintain daily record logs of the amount of fuel used and the hours of operation. The logs shall be maintained on file for a period of at least 5 years from the date the data is recorded, and shall be made available to the Department upon request. The logs at a minimum shall contain the following:

Monthly
a. Designation of month and year of operation for which records are being tabulated;
b. Consecutive 12-months total of heat input for the furnaces (combined) in units of MMBTUs;
c. Consecutive 12-months total of throughput rate (product) for each furnace; and
d. Monthly hours of operation for each furnace.
[Rule 62-4.070(3), F.A.C.]

Note: A consecutive 12-months total is equal to the total for the month in question plus the totals for the eleven months previous to the month in question. A consecutive 12-months total treats each month of the year as the end of a 12-month period. A 12-months total is not a year-to-date total. Facilities that have not been operating for 12 months should retain 12-months totals using whatever number of months of data is available until such a time as a consecutive 12-months total can be maintained each month. The monthly logs shall be completed by the end of the following month. [Rule 62-4.070(3), F.A.C.]