

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

November 29, 2011

**PERMIT TO INSTALL**  
279-04A

**ISSUED TO**  
The Nugent Sand Company, Inc.

**LOCATED AT**  
4912 Russell Road  
Dalton Township, Michigan

**IN THE COUNTY OF**  
Muskegon

**STATE REGISTRATION NUMBER**  
N7270

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

**October 31, 2011**

DATE PERMIT TO INSTALL APPROVED:

**November 29, 2011**

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

**PERMIT TO INSTALL**

**Table of Contents**

<b>Section</b>	<b>Page</b>
Alphabetical Listing of Common Abbreviations / Acronyms .....	2
General Conditions .....	2
Special Conditions .....	2
Emission Unit Summary Table.....	2
Special Conditions for EUSANDDRYER1 .....	2
Special Conditions for EUSANDDRYER2 .....	2
Special Conditions for EUSANDPROCESS .....	2
Flexible Group Summary Table .....	2
Special Conditions for FGTRUCK&STORE.....	2
Appendix A.....	2
Appendix B.....	2

**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant/Measurement Abbreviations</b>	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
EPA	Environmental Protection Agency	gr	Grains
EU	Emission Unit	Hg	Mercury
FG	Flexible Group	hr	Hour
GACS	Gallon of Applied Coating Solids	H <sub>2</sub> S	Hydrogen Sulfide
GC	General Condition	hp	Horsepower
HAP	Hazardous Air Pollutant	lb	Pound
HVLP	High Volume Low Pressure *	m	Meter
ID	Identification	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	ng	Nanogram
MDEQ	Michigan Department of Environmental Quality (Department)	NO <sub>x</sub>	Oxides of Nitrogen
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	PM less than 10 microns diameter
NSPS	New Source Performance Standards	PM2.5	PM less than 2.5 microns diameter
NSR	New Source Review	pph	Pound per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonably Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO <sub>2</sub>	Sulfur Dioxide
SRN	State Registration Number	THC	Total Hydrocarbons
TAC	Toxic Air Contaminant	tpy	Tons per year
TEQ	Toxicity Equivalence Quotient	µg	Microgram
VE	Visible Emissions	VOC	Volatile Organic Compounds
		yr	Year

\* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

### GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

**SPECIAL CONDITIONS**

**EMISSION UNIT SUMMARY TABLE**

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUSANDDRYER1	A 10.0 MMBtu/hr natural gas fired fluidized bed sand dryer and a fluidized bed cooler which are ducted to a common wet scrubber. The fluidized bed sand dryer system blows heated air upward through the sand to dry it.	
EUSANDDRYER2	A 16.0 MMBtu/hr natural gas fired fluidized bed sand dryer and a fluidized bed cooler which are ducted to a common wet scrubber. The fluidized bed sand dryer system blows heated air upward through the sand to dry it.	
EUSANDPROCESS	<p>A wash plant process consisting of equipment used for washing, screening flotation, desliming, classification and dewatering of sand. The wash plant is a completely wet process up to the sand storage piles.</p> <p>Sand processing equipment consisting of hoppers, conveyors, elevators, screens, storage bins, etc, used for material handling, sorting/blending of the sand into various product types, truck loading and bagging operations. Process equipment will minimize emissions by lowering drop heights, conveyor covers, enclosures, and/or be operated within a building.</p>	
EUTRUCKTRAFFIC	Truck traffic for delivery of dried sand products to customers. Traffic associated with the delivery of dried sand shall occur on paved roadways.	FGTRUCK&STORE
EUSTORAGEPILES	Open area stock piles of various sized sand product waiting to be dried and processed.	FGTRUCK&STORE
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.		

**The following conditions apply to: EUSANDDRYER1**

**DESCRIPTION:** A 10.0 MMBtu/hr natural gas fired fluidized bed sand dryer and a fluidized bed cooler. The fluidized bed sand dryer system blows heated air upward through the sand to dry it.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** Wet scrubber

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	0.047 lbs per 1,000 lbs exhaust gases	Test Protocol*	EUSANDDRYER1	GC 13	R 336.1331, 40 CFR 60.732
2. PM10	5.0 pph	Test Protocol*	EUSANDDRYER1	SC V.2	R 336.2803, R 336.2804, 40 CFR 52.21 (c)&(d)
3. PM2.5	1.2 pph	Test Protocol*	EUSANDDRYER1	SC V.2	R 336.2804, 40 CFR 52.21 (d)

\*Test Protocol shall specify averaging time

4. Visible emissions from EUSANDDRYER1 shall not exceed a six-minute average of 10 percent opacity. (R 336.1301, R 336.1331, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))

**II. MATERIAL LIMITS**

1. The permittee shall not process more than 2,760 tons of sand product per day nor 900,000 tons of sand product through EUSANDDRYER1 per 12-month rolling time period as determined at the end of each calendar month. (R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))
2. The permittee shall burn only natural gas in EUSANDDRYER1. (R 336.1225, R 336.1702, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not operate EUSANDDRYER1 unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the EUSANDDRYER1 wet scrubber, is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. (R 336.1331, R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate any portion of EUSANDDRYER1 unless the wet scrubber is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the wet scrubber is defined as any daily two-hour arithmetic average pressure drop that is 90 percent or greater than, and a daily two-hour

arithmetic scrubber flow rate that is greater than 80 percent but less than 120 percent of, the average value from the most recent performance test that demonstrated compliance with the particulate limit. **(R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d), 40 CFR 60.735)**

2. The permittee shall install and maintain a belt scale on the conveyor C-3 portion of EUSANDDRYER1 which continuously shows the daily throughput rate for the conveyor. **(R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure loss across the EUSANDDRYER1 wet scrubber on a continuous basis. The monitoring device shall be certified by the manufacturer to be accurate within 5 percent of water column gauge pressure at the level of operation and must be calibrated on an annual basis in accordance with manufacturer's instructions. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 60.734)**
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the scrubbing liquid flow rate to the EUSANDDRYER1 wet scrubber on a continuous basis. The monitoring device shall be certified by the manufacturer to be accurate within 5 percent of the design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 60.734)**

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 180 days after commencement of initial startup of EUSANDDRYER2, the permittee shall verify PM10 and PM2.5 emission rates from EUSANDDRYER1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**
2. The permittee shall keep daily (from the C-3 belt scale) and monthly records of the amount of sand processed through EUSANDDRYER1. Further the permittee shall calculate on a monthly basis, the yearly throughput rate based upon the most recent 12-month rolling time period. The permittee shall keep records of the amount of material processed on file and make them available to the Department upon request. **(R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**
3. The permittee shall calculate and record daily the arithmetic average over a two-hour period of both the wet scrubber pressure drop and the wet scrubber flow rate, from the recordings of the monitoring devices. The records shall be kept in accordance with 40 CFR Part 60, Subpart UUU and made available to the Department upon request. **(R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d), 40 CFR Part 60 Subpart UUU)**
4. The permittee shall keep, in a satisfactory manner, records of the pressure loss and scrubbing liquid flow rate measured during the most recent stack test for the EUSANDDRYER1 wet scrubber on file at the facility and make them available to the Department upon request. **(R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d), 40 CFR Part 60 Subpart UUU)**

**VII. REPORTING**

1. The permittee shall submit written reports semiannually of exceedances of the control device operating parameters from the most recent performance test that demonstrated compliance with the particulate limit. **(40 CFR 60.735(b))**

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stack listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVSANDDRYER1	60	46	<b>R 336.2803, R 336.2804, 40 CFR 52.21 (c) &amp; (d)</b>

**IX. OTHER REQUIREMENTS**

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and UUU, as they apply to EUSANDDRYER1. **(40 CFR Part 60 Subparts A & UUU)**

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: EUSANDDRYER2**

**DESCRIPTION:** A 16.0 MMBtu/hr natural gas fired fluidized bed sand dryer and a fluidized bed cooler. The fluidized bed sand dryer system blows heated air upward through the sand to dry it.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** Wet scrubber

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	0.047 lbs per 1,000 lbs exhaust gases	Test Protocol*	EUSANDDRYER2	SC V.1	R 336.1331, 40 CFR 60.732
2. PM10	5.0 pph	Test Protocol*	EUSANDDRYER2	SC V.2	R 336.2803, R 336.2804, 40 CFR 52.21 (c)&(d)
3. PM2.5	0.7 pph	Test Protocol*	EUSANDDRYER2	SC V.2	R 336.2804, 40 CFR 52.21 (d)

\*Test Protocol shall specify averaging time

4. Visible emissions from EUSANDDRYER2 shall not exceed a six-minute average of 10 percent opacity. (R 336.1301, R 336.1331, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))

**II. MATERIAL LIMITS**

1. The permittee shall not process more than 2,880 tons of sand product per day nor 1,050,000 tons of sand product through EUSANDDRYER2 per 12-month rolling time period as determined at the end of each calendar month. (R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))
2. The permittee shall burn only natural gas in EUSANDDRYER2. (R 336.1225, R 336.1702, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not operate EUSANDDRYER2 unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the EUSANDDRYER2 wet scrubber, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. (R 336.1331, R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate any portion of EUSANDDRYER2 unless the wet scrubber is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the wet scrubber is defined as

any daily two-hour arithmetic average pressure drop that is 90 percent or greater than, and a daily two-hour arithmetic scrubber flow rate that is greater than 80 percent but less than 120 percent of, the average value from the most recent performance test that demonstrated compliance with the particulate limit. **(R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d), 40 CFR 60.735)**

2. The permittee shall install and maintain a belt scale on the conveyor B-3 portion of EUSANDDRYER2 which continuously shows the daily throughput rate for the conveyor. **(R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure loss across the EUSANDDRYER2 wet scrubber on a continuous basis. The monitoring device shall be certified by the manufacturer to be accurate within 5 percent of water column gauge pressure at the level of operation and must be calibrated on an annual basis in accordance with manufacturer's instructions. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 60.734)**
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the scrubbing liquid flow rate to the EUSANDDRYER2 wet scrubber on a continuous basis. The monitoring device shall be certified by the manufacturer to be accurate within 5 percent of the design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 60.734)**

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall verify PM emission rates from stack emissions from EUSANDDRYER2, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense, in accordance with 40 CFR Part 60 Subparts A and UUU. The permittee shall notify the AQD District Supervisor in writing within 15 days of the date of commencement of trial operation in accordance with 40 CFR 60.7(a)(3). Stack testing procedures and the location of stack testing ports shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 60 Appendix A. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.

The owner shall use the monitoring devices to determine the average change in pressure of the gas stream across the scrubber and the average flowrate of the scrubber liquid during each of the particulate matter runs. The arithmetic averages of the three runs shall be used as the baseline for average values for the purposes of recordkeeping and reporting. **(40 CFR Part 60 Subparts A & UUU)**

2. Within 180 days after commencement of initial startup, the permittee shall verify PM10 and PM2.5 emission rates from EUSANDDRYER2 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

2. The permittee shall keep daily (from the B-3 belt scale) and monthly records of the amount of sand processed through EUSANDDRYER2. Further the permittee shall calculate on a monthly basis, the yearly throughput rate based upon the most recent 12-month rolling time period. The permittee shall keep records of the amount of material processed on file and make them available to the Department upon request. **(R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**
3. The permittee shall calculate and record daily the arithmetic average over a two-hour period of both the wet scrubber pressure drop and the wet scrubber flow rate, from the recordings of the monitoring devices. The records shall be kept in accordance with 40 CFR Part 60, Subpart UUU and made available to the Department upon request. **(R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d), 40 CFR Part 60 Subpart UUU)**
4. The permittee shall keep, in a satisfactory manner, records of the pressure loss and scrubbing liquid flow rate measured during the most recent stack test for the EUSANDDRYER2 wet scrubber on file at the facility and make them available to the Department upon request. **(R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d), 40 CFR Part 60 Subpart UUU)**

## **VII. REPORTING**

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUSANDDRYER2. **(R 336.1201(7)(a))**
2. The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7)**
3. The permittee shall submit written reports semiannually of exceedances of the control device operating parameters from the most recent performance test that demonstrated compliance with the particulate limit. **(40 CFR 60.735(b))**

## **VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stack listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVSANDDRYER2	48	80	<b>R 336.2803, R 336.2804, 40 CFR 52.21 (c) &amp; (d)</b>

## **IX. OTHER REQUIREMENTS**

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and UUU, as they apply to EUSANDDRYER2. **(40 CFR Part 60 Subparts A & UUU)**

### **Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: EUSANDPROCESS**

**DESCRIPTION:** A wash plant process consisting of equipment used for washing, screening flotation, desliming, classification and dewatering of sand. The wash plant is a completely wet process up to the sand storage piles.

Sand processing equipment consisting of hoppers, conveyors, elevators, screens, storage bins, etc, used for material handling, sorting/blending of the sand into various product types, truck loading and bagging operations.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** Process equipment will minimize emissions by lowering drop heights, conveyor covers, enclosures, and/or be operated within a building.

**I. EMISSION LIMITS**

1. There shall be no visible emissions from the wash plant portion of EUSANDPROCESS prior to sand material storage piles. **(R 336.1301, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not operate any portion of EUSANDPROCESS unless each portion of EUSANDPROCESS meets the specific opacity limit listed in Appendix A of this permit. **(R 336.1301, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**
2. The permittee shall not operate any material handling portions of EUSANDPROCESS unless the fugitive dust control plan for all material storage piles and all material handling operations specified in Appendix B has been implemented and is maintained. **(R 336.1371)**

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate any portion of EUSANDPROCESS unless the equipment's specified control device is installed, maintained and operated in a satisfactory manner as listed in Appendix A. **(R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

NA

**IX. OTHER REQUIREMENTS**

1. Within 45 days of issuance of this permit, the permittee shall label all equipment using the company ID Numbers in Appendix A, according to a method acceptable to the AQD District Supervisor. Labels shall be in a conspicuous location on the equipment. Within seven days of completing the labeling, the permittee shall notify the AQD District Supervisor, in writing, as to the date the labeling was completed. **(R 336.1201)**

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

### FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGTRUCK&STORE	Truck traffic for delivery of dried sand products to customers and open area stock piles of various sized sand product waiting to be dried and processed.	EUTRUCKTRAFFIC, EUSTORAGEPILES

#### The following conditions apply to: FGTRUCK&STORE

**DESCRIPTION:** Truck traffic for delivery of dried sand products to customers and open area stock piles of various sized sand product waiting to be dried and processed.

**Emission Units:** EUTRUCKTRAFFIC, EUSTORAGEPILES

**POLLUTION CONTROL EQUIPMENT:** Fugitive Dust Control Plan

#### I. EMISSION LIMITS

1. Visible emissions from all wheel loaders and all truck traffic and from each of the material storage piles maintained under FGTRUCK&STORE shall not exceed five (5) percent opacity. Compliance shall be demonstrated using Test Method 9D as defined in Section 324.5525(j) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). **(R 336.1301, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

#### II. MATERIAL LIMITS

NA

#### III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGTRUCK&STORE unless the fugitive dust control plan for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix B has been implemented and is maintained. **(R 336.1371, R 336.1372, R 336.1901, Act 451 324.5524)**

#### IV. DESIGN/EQUIPMENT PARAMETERS

NA

#### V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall keep records for FGTRUCK&STORE to demonstrate compliance with fugitive dust control plan specified in Appendix B. The records include, but are not limited to the items identified in Appendix B. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

NA

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**APPENDIX A**

<b>Equipment Description</b>	<b>ID Number</b>	<b>Opacity Limit (Percent)</b>	<b>Control Device</b>
<b>Sand Storage Piles</b>		5	
<b>Sand Process Plant</b>			
Blend Chute	BC	No Visible Emissions	Enclosure <sup>2</sup>
Conveyor	B-1	10	Enclosure <sup>1</sup>
Conveyor	B-2	10	Wet Process – None
Conveyor	B-3	10	Enclosure <sup>1</sup> / Belt Scale
Conveyor	B-4	10	Enclosure <sup>1</sup>
Conveyor	B-5	10	Enclosure <sup>1</sup>
Conveyor	B-6	10	Enclosure <sup>1</sup>
Conveyor	C-1	10	Wet Process - None
Conveyor	C-2	10	Wet Process - None
Conveyor	C-3	10	Enclosure <sup>1</sup> / Belt Scale
Conveyor	C-4	10	Enclosure <sup>1</sup>
Conveyor	C-5 Scrap	10	Enclosure <sup>1</sup>
Conveyor	C-6	No Visible Emissions	Enclosed within Building
Conveyor	S-1	No Visible Emissions	Enclosed within Building
Conveyor	S-2	No Visible Emissions	Enclosed within Building
Conveyor	S-3	No Visible Emissions	Enclosed within Building
Conveyor	S-4	No Visible Emissions	Enclosed within Building
Conveyor	S-5	10	Enclosure <sup>1</sup>
Conveyor	S-6	10	Enclosure <sup>1</sup>
Conveyor	S-7	10	Enclosure <sup>1</sup>
Day Tank	Bin 8/9	No Visible Emissions	None
Dump Box	DB	10	Wet Process - None
Dump Box	DB-2	10	Wet Process - None
Elevator	No. E-1	No Visible Emissions	Enclosure <sup>2</sup>
Elevator	No. E-2	No Visible Emissions	Enclosure <sup>2</sup>
Elevator	No. E-3	No Visible Emissions	Enclosure <sup>2</sup>
Elevator	No. E-4	No Visible Emissions	Enclosure <sup>2</sup>
Elevator	No. E-5	No Visible Emissions	Enclosure <sup>2</sup>
Screens	550/390	No Visible Emissions	Enclosure <sup>2</sup>
Screens 1&2	-20 Screen1 -20 Screen2	No Visible Emissions	Enclosed within Building
Silo 390	Silo 3	No Visible Emissions	None
Silo 480	Silo 1	No Visible Emissions	None
Silo 550	Silo 4	No Visible Emissions	None
Silo 850	Silo 2	No Visible Emissions	None
Storage Bin (bagging)	Bin 6	No Visible Emissions	None

<b>Equipment Description</b>	<b>ID Number</b>	<b>Opacity Limit (Percent)</b>	<b>Control Device</b>
Storage Bin (bagging)	Bin 7	No Visible Emissions	None
Truck Loader	T-20/T-22	10	Enclosure <sup>1</sup>
Wet Tank	Bin 1	10	Wet Process - None
Wet Tank	Bin 2	10	Wet Process - None
<sup>1</sup> Three sided enclosure/wind barrier (not air tight or totally enclosed) <sup>2</sup> Top and four sides enclosed (not air tight or totally enclosed, bottom maybe open)			

## **APPENDIX B Fugitive Dust Control Plan**

### **I. Site Roadways / Plant Yard**

- A. The dust on the site roadways and the plant yard shall be controlled by applications of water, calcium chloride or other acceptable and approved fugitive dust control compounds. Applications of dust suppressants shall be done as often as necessary to meet all applicable emission limits. A record of all watering/dust suppressant applications shall be kept on file and be made available to the AQD upon request.
- B. All paved roadways and the plant yards shall be swept as needed between applications.
- C. Any material spillage on roads shall be cleaned up immediately.
- D. All commercial truck traffic which transports sand shall occur on paved road surfaces.

### **II. Plant**

The drop distance at each transfer point shall be reduced to the minimum the equipment can achieve. The transfer point from the re-circulating belt to the feed belt shall be equipped with an enclosed chute.

### **III. Storage Piles**

- A. Stockpiling of all sand shall be performed to minimize drop distance and control potential dust problems.
- B. Stockpiles shall be watered on an as needed basis in order to meet the opacity limit of 5 percent. Equipment to apply water or dust suppressant shall be available at the site or on call for use at the site within a given operating day. A record of all watering/dust suppressant applications shall be kept on file and be made available to the AQD upon request.

### **IV. Truck Traffic**

On-site vehicles shall be loaded to prevent their contents from dropping, leaking, blowing or otherwise escaping. This shall be accomplished by loading so that no part of the load shall come in contact within 6 inches of the top of any side board, side panel or tailgate. Otherwise, the truck shall be tarped.

### **V. AQD/MDEQ Inspection**

The provisions and procedures of this plan are subject to adjustment by written notification from the AQD if, following an inspection, the AQD finds the fugitive dust requirements and/or permitted emission limits are not being met.