

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

March 24, 2014

PERMIT TO INSTALL
150-08E

ISSUED TO
U.S. Silica Company Rockwood Plant

LOCATED AT
20837 North Huron River Drive
Rockwood, Michigan

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
A7757

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:

February 18, 2014

DATE PERMIT TO INSTALL APPROVED:

March 24, 2014

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
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
CO ₂ e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfuction Abatement Plan	NO _x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO ₂	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	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
EUSANDDRYER	A 30.0 MM BTU/hr natural gas or propane fired fluidized bed sand dryer which is ducted to a wet scrubber. The fluidized bed sand dryer system blows heated air upward through the sand to dry it. The fluidized bed sand dryer is controlled by a wet scrubber.	N/A
EUSANDPROCESS	A wash plant process consisting of equipment used for washing, screening, flotation, desliming, classification and dewatering of sand. The wash plant portion of EUSANDPROCESS is a completely wet process up to the sand dryer. Sand processing equipment consisting of hoppers, truck and rail loading, conveyors, elevators, screens, storage bins, etc, used for material handling, sorting/blending of the sand into various product types, truck loading and railcar loading. Process equipment will minimize emissions by lowering drop heights, conveyor covers, enclosures, and/or be operated within a building. A fabric filter collector controls emissions from screens and associated transfer points. A Hi-Vac industrial vacuum cleaning system is used to clean up spilled sand in the screen house and is controlled with cartridge filters.	N/A
EUTRUCKTRAFFIC	Truck traffic for delivery of material products to customers; truck traffic in the processing area and loader traffic associated with processing equipment, storage pile handling and loading delivery trucks. All commercial truck areas and unpaved roads.	N/A
EUSTORAGE	Open area stock piles of various material sizes and product types. Water spray of material products are used when necessary for material storage piles.	N/A
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: EUSANDDRYER

DESCRIPTION: A 30.0 MM BTU/hr natural gas or propane fired fluidized bed sand dryer which is ducted to a wet scrubber. The fluidized bed sand dryer system blows heated air upward through the sand to dry it. The fluidized bed sand dryer is controlled by a wet scrubber.

Flexible Group ID: N/A

POLLUTION CONTROL EQUIPMENT: The fluidized bed sand dryer is controlled by a wet scrubber.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.025 gr/dscf *	Test Protocol	SVWETSCRUBBER	General Condition No. 13	R 336.1331 40 CFR 60.730
2. PM10	7.01 pph	Test Protocol	SVWETSCRUBBER	General Condition No. 13	40 CFR 52.21 Subparts (c) & (d)
* Calculated on a dry gas basis					

3. Visible emissions from EUSANDDRYER shall not exceed 10 percent opacity except as specified in the federal Standards of Performance for New Stationary Sources, 40 CFR Part 60 Subparts A and UUU. **(R 336.1301, 40 CFR 60.730)**

II. MATERIAL LIMITS

1. The permittee shall not process more than 2,880 tons of material per day nor 1,000,000 tons of material through EUSANDDRYER per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a), 40 CFR 52.21 (c) & (d))**
2. The permittee shall only burn natural gas or propane in EUSANDDRYER. **(R 336.1205(1)(a), R 336.1702, 40 CFR 52.21(c) & (d))**
3. The permittee shall not process any asbestos tailing or asbestos containing waste materials in EUSANDDRYER pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61 Subpart M. **(40 CFR Part 61 Subpart M)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUSANDDRYER unless the nuisance minimization plan for fugitive dust 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)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUSANDDRYER unless the wet scrubber is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1910, 40 CFR 52.21(c) and (d), 40 CFR Part 60.730)**

2. The permittee shall install and maintain a device to continuously measure the pressure loss across the wet scrubber portion of EUSANDDRYER. 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 336.1205, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d), 40 CFR Part 60.734(d))**
3. The permittee shall install and maintain a device to for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber portion of EUSANDDRYER. The monitoring device shall be certified by the manufacturer to be accurate within 5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions. **(R 336.1205, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d), 40 CFR Part 60.734(d))**
4. The permittee shall install and maintain a belt scale on the transfer conveyor BC-05 portion of EUSANDDRYER which continuously shows the daily throughput rate for the conveyor. **(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))**

1. Within 60 days after achieving maximum production rate, but not later than 180 days after commencement of trial operation, the permittee shall evaluate visible emissions from EUSANDDRYER, at owner's expense, in accordance with federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subparts A and UUU. The permittee must have prior approval from the AQD for visible emission observation procedures. Verification of visible emissions includes the submittal of a complete report of opacity observations to the AQD within 45 days following the last date of the evaluation. **(R 336.1301, 40 CFR Part 60 Subparts A & UUU)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record, in a satisfactory manner, an arithmetic average over a 2-hour period of both the change in pressure of the gas stream across the scrubber and the flowrate of the scrubbing liquid of the wet scrubber in EUSANDDRYER on a daily basis. **(R 336.1205, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d), 40 CFR Part 60.735(b))**
2. The permittee shall keep daily and monthly records of the amount of material processed through EUSANDDRYER. 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. **(40 CFR 52.21 (c) & (d))**

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 EUSANDDRYER. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVWETSCRUBBER	42	60	40 CFR 52.21 (c) & (d)

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 EUSANDDRYER. **(40 CFR Part 60 Subparts A & UUU)**

Footnotes:

¹This 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 portion of EUSANDPROCESS is a completely wet process up to the sand dryer. Sand processing equipment consisting of hoppers, truck and rail loading, conveyors, elevators, screens, storage bins, etc., used for material handling, sorting/blending of the sand into various product types, truck loading and railcar loading. Process equipment will minimize emissions by lowering drop heights, conveyor covers, enclosures, and/or be operated within a building. A fabric filter collector controls emissions from screens and associated transfer points. A Hi-Vac industrial vacuum cleaning system is used to clean up spilled sand in the screen house and is controlled with cartridge filters.

Flexible Group ID: N/A

POLLUTION CONTROL EQUIPMENT: Process equipment will minimize emissions by lowering drop heights, conveyor covers, enclosures, and/or be operated within a building. A fabric filter collector controls emissions from screens and associated transfer points.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.022 gr/dscf *	Test Protocol	SVCOLLECTOR	General Condition No. 13	R 336.1331
2. PM10	4.61 pph	Test Protocol	SVCOLLECTOR	General Condition No. 13	40 CFR 52.21 Subparts (c) & (d)
3. PM2.5	4.61 pph	Test Protocol	SVCOLLECTOR	General Condition No. 13	40 CFR 52.21 Subparts (c) & (d)
* Calculated on a dry gas basis					

4. Visible emissions from the drop point and transfer point portions of EUSANDPROCESS shall not exceed 10 percent opacity. **(R 336.1301, 40 CFR 52.21 (c) & (d))**

II. MATERIAL LIMITS

1. The permittee shall not process any asbestos tailing or asbestos containing waste materials in EUSANDPROCESS pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61 Subpart M. **(40 CFR Part 61 Subpart M)**

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, 40 CFR 52.21 (c) & (d))**

2. The permittee shall not operate EUSANDPROCESS unless the nuisance minimization plan for fugitive dust 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)**

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, 40 CFR 52.21 (c) & (d))**
2. The permittee shall not operate the screening portion of EUSANDPROCESS unless the fabric filter is installed, maintained, and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21 (c) & (d))**
3. The permittee shall not operate EUSANDPROCESS unless a gauge, which measures the pressure drop across the fabric filter collector and sounds an alarm when the pressure drop exceeds ten inches water, is installed, maintained and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910, 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))**

N/A

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record, in a satisfactory manner, a pressure drop reading required by Special Condition IV.3 on a daily basis. **(R 336.1301, R 336.1331, R 336.1910, R 40 CFR 52.21 (c) & (d))**

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 EUSANDPROCESS. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVCOLLECTOR	36	56	40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

1. Within 45 days of installation, 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)**

The following conditions apply to: EUTRUCKTRAFFIC

DESCRIPTION: Truck traffic for delivery of material products to customers; truck traffic in the processing area and loader traffic associated with processing equipment, storage pile handling and loading delivery trucks. All commercial truck areas and unpaved roads.

Flexible Group ID: N/A

POLLUTION CONTROL EQUIPMENT: N/A

I. EMISSION LIMITS

1. Visible emissions from all wheel loaders and all truck traffic, operated in conjunction with EUTRUCKTRAFFIC, shall not exceed 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, 40 CFR 52.21(c) & (d), Act 451 324.5524)**

II. MATERIAL LIMITS

N/A

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUTRUCKTRAFFIC unless the program for continuous fugitive emissions control 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, Act 451 324.5524)**

IV. DESIGN/EQUIPMENT PARAMETERS

N/A

V. TESTING/SAMPLING

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

N/A

VI. MONITORING/RECORDKEEPING

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

N/A

VII. REPORTING

N/A

VIII. STACK/VENT RESTRICTIONS

N/A

IX. OTHER REQUIREMENTS

N/A

The following conditions apply to: EUSTORAGE

DESCRIPTION: Open area stock piles of various material sizes and product types. Water spray of material products are used when necessary for material storage piles.

Flexible Group ID: N/A

POLLUTION CONTROL EQUIPMENT: N/A

I. EMISSION LIMITS

1. Visible emissions from each of the material storage piles maintained under EUSTORAGE shall not exceed 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, 40 CFR 52.21(c) & (d), Act 451 324.5524)**

II. MATERIAL LIMITS

N/A

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUSTORAGE unless the program for continuous fugitive emissions control 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, Act 451 324.5524)**

IV. DESIGN/EQUIPMENT PARAMETERS

N/A

V. TESTING/SAMPLING

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

N/A

VI. MONITORING/RECORDKEEPING

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

N/A

VII. REPORTING

N/A

VIII. STACK/VENT RESTRICTIONS

N/A

IX. OTHER REQUIREMENTS

N/A

APPENDIX A

Equipment List

Equipment Description	ID Number	Opacity Limit (Percent)	Control Device
Storage piles		5	Saturated material
Truck dump hopper	HD-01	10	None
Truck dump hopper	HD-02	10	None
Feeder	VF-01	10	None
Feeder	VF-02	10	None
Conveyor	BC-01	10	None
Reclaim hopper		10	Saturated material
Feeder	VF-03	10	Saturated material
Conveyor	BC-02	10	Saturated material
Conveyor	BC-03	10	Saturated material
Conveyor	BC-04	No visible emissions	Wet process/enclosed in building
Sand scrubber	SC-01	No visible emissions	Wet process/enclosed in building
Sand scrubber	SC-02	No visible emissions	Wet process/enclosed in building
Hydrosizer	HS-01	No visible emissions	Wet process/enclosed in building
Flotation Conditioner	FC-01	No visible emissions	Wet process/enclosed in building
Flotation Conditioner	FC-02	No visible emissions	Wet process/enclosed in building
Flotation Machine	FM-01	No visible emissions	Wet process/enclosed in building
Belt feeder	BF-01	No visible emissions	Wet process/enclosed in building
Conveyor	BC-05	No visible emissions	Wet process/enclosed in building
Fluid bed dryer	DR-01	10	Wet scrubber
Conveyor	BC-06	No visible emissions	Wet process/enclosed in building
Vibratory screen	VS-01	7	Dust collector
Vibratory screen	VS-02	7	Dust collector
Vibratory screen - two deck scalping screen	VS-03	10	Saturated Material
Dry sand storage tank vents	TV-01	No visible emissions	Enclosure
Bucket elevator	BE-01	10 (from collector)	Dust collector and partial enclosure
Bucket elevator	BE-02	10 (from collector)	Dust collector and partial enclosure
Bucket elevator	BE-03	10 (from collector)	Dust collector and partial enclosure
Gyramax screen	VS-03	10 (from collector)	Dust collector and partial enclosure
Gyramax screen	VS-04	10 (from collector)	Dust collector and partial enclosure
Gyramax screen	VS-05	10 (from collector)	Dust collector and partial enclosure
Conveyor	BC-07	10 (from collector)	Dust collector and partial enclosure
Conveyor	BC-08	10 (from collector)	Dust collector and partial enclosure
Conveyor	BC-09	10 (from collector)	Dust collector and partial enclosure
500 ton storage tank	SS-05	10 (from collector)	Dust collector and partial enclosure
500 ton storage tank	SS-06	10 (from collector)	Dust collector and partial enclosure

Equipment Description	ID Number	Opacity Limit (Percent)	Control Device
Bucket elevator	BE-04	10 (from collector)	Dust collector and partial enclosure
Bucket elevator	BE-05	10 (from collector)	Dust collector and partial enclosure
Bucket elevator	BE-06	10 (from collector)	Dust collector and partial enclosure

APPENDIX B

Nuisance Minimization Plan: Fugitive Dust

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.

II. Plant

The drop distance at each transfer point shall be reduced to the minimum the equipment can achieve.

III. Storage Piles

- A. Stockpiling of all nonmetallic minerals 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.