FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

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GOVERNOR

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LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

FINAL PERMITS

PERMITTEE

Standard Sand & Silica Company
P.O. Box 1059
Davenport, Florida 33816

Authorized Representative:
Tim Carnes, Vice President
Environmental & Safety

Air Permit Nos. 1050014-008-AC
1050014-009-AO
Permits Expire: 12/ 31/2014 (AC)
07/08/2019 (AO)

Davenport Facility
Minor Air Construction and Operation Permits
Construction Permit and Operation Permit Renewal

These are the final air construction and operation permits, in one document. Construction Permit 1050014-008-AC is for the reduction in frequency of particulate matter and visible emissions testing on all emissions units from once every federal fiscal year (October 1 – September 30) to once every five years, prior to the renewal of the operation permit. Operation Permit 1050014-009-AO is for the renewal and replacement of Operation Permit No. 1050014-006-AO. The proposed changes will occur at the Davenport Facility (Standard Industrial Classification No. 1446). The facility is located in Polk County at 1850 US Highway 17-92 North, Davenport, Florida. The UTM coordinates are Zone 17, 442.11 km East, and 3118.24 km North. As noted in the Final Determination provided with these final permits, no changes or only minor changes and clarifications were made to the draft permits.

This final document is organized by the following sections:

Section 1. General Information

Section 2. Administrative Requirements and Facility-wide Specific Conditions

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Due to the technical nature of the project, this document contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this document.

These air pollution permits are issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of these permits. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of these final permits, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Hillsborough County, Florida

_____ _____

Kelley M. Boatwright Effective Date
Permitting & Waste Cleanup Program Administrator
Southwest District

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination, the Final Permits and the Appendices) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on the date indicated to the persons listed below.

Mr. Tim Carnes, Vice President, Environmental &Safety, Standard Sand & Silica Company (TCarnes@crystaldataservices.com)

Lynn Robinson, P.E. Permitting Manager, Southern Environmental Services, Inc. (lrobinson@sesfla.com)

Erin DiBacco, SWD Compliance Assurance Program Manager (Erin.DiBacco@dep.state.fl.us)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

_____ _____

(Clerk) (Date)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

The existing facility is a wet and dry sand processing facility with a Silica Plant (located on the west side if Highway 17-92) and a Flint Plant (located on the east side of Highway 17-92). Sand is obtained from a wet mine located onsite (owned and operated by another corporation) or it is hauled from the permittee's other wet mine operations.

The existing facility consists of the following emissions units.

Facility ID No. 1050014

EU ID No.	Emissions Unit Description
001	Silica Dryer No.1 (North) with a dry cyclone separator
002	Silica Dryer No.2 (South) with a dry cyclone separator
003	Flint Dryer No.1 (South) with a dry cyclone separator
004	Flint Dryer No.2 (North) with a dry cyclone separator followed by a wet scrubber
005	Truck Loading Operations (Silica Plant) with a baghouse

Project Description and Affected Emissions Units

This project will reduce the frequency of particulate matter and visible emissions testing on all Emissions Units from once every federal fiscal year (October 1 – September 30) to once every five years prior to the renewal of the operation permit and renew the operation permit. This will modify the compliance testing requirements for the following emissions units.

EU ID No.	Emissions Unit Description
001	Silica Dryer No.1 (North) with a dry cyclone separator
002	Silica Dryer No.2 (South) with a dry cyclone separator
003	Flint Dryer No.1 (South) with a dry cyclone separator
004	Flint Dryer No.2 (North) with a dry cyclone separator followed by a wet scrubber
005	Truck Loading Operations (Silica Plant) with a baghouse

NOTE: *Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.*

Exempt Emission Sources/Activities

- The following storage tanks per Rule 62-210.300(3)(b), F.A.C.(Generic Emissions Unit or Activity Exemption):

8,000 gal. propane gas tank, Flint Plant
150 gal. propane gas tank, Flint Plant
120 gal. propane gas tank, Flint Plant
25,000 gal. No. 5 fuel oil tank, Flint Plant
8,000 gal. No. 5 fuel oil tank, Flint Plant
8,000 gal. Econo Float 710 tank, Flint Plant
9,000 gal. EconFroth 910 tank, Flint Plant
8,000 gal. Sulfuric Acid tank, Flint Plant

12,000 gal. No. 5 fuel oil tank, Silica Plant
10,000 gal. No. 2 fuel oil tank, Silica Plant

Chlorine cylinders used to treat potable water
Wet Sand Froth Processing Operations (Flint Plant)

- The following activities per Rule 62-4.040, F.A.C.:

18" x 63' bucket elevator, Silica Plant
(2) 4' x 8' screen decks, Silica Plant
(2) 4' x 10' screen decks, Silica Plant
(4) 40 ton storage bins, Silica Plant
24"x 40' conveyor, Silica Plant
18" x 170' conveyor, Silica Plant
(6) 70 ton storage bins, Silica Plant
12" x 50' bucket elevator, Silica Plant
4.25' x 7.5' screen deck, Silica Plant
18" x 32' conveyor, Silica Plant
14" x 30' bucket elevator, Silica Plant
18" x 40' conveyor, Silica Plant
4 spout bagging machine, Silica Plant
18" x 50' bucket elevator, Silica Plant
175 ton storage bin, Silica Plant
Miscellaneous stockpiles, Silica Plant

24" x 150' conveyor, Flint Plant
18 ton dryer surge bin, Flint Plant
18" x 62' bucket elevator, Flint Plant
(2) 4' x 11' screen decks, Flint Plant
(2) 4.25' x 7.5' screen decks, Flint Plant
225 Storage bin, Flint Plant
(2) 18" & 24" conveyor system for truck and railcar loading, Flint Plant
45 tons storage bin, Flint Plant
24" x 165' conveyor, Flint Plant
60 Storage surge bin, Flint Plant
(2) Vibrating dryer feeders, Flint Plant
(2) 18" x 76' bucket elevator, Flint Plant
(2) 4' x 20' screen decks, Flint Plant
250 ton storage bin (west), Flint Plant
65 ton storage bin (east), Flint Plant
Truck and Railcar Loading Stations, Flint Plant

Rule Applicability Notes:
None of the four dryers are subject to 40 CFR 60, Subpart UUU – Standards of Performance for Calciners and Dryers in Mineral Industries. All four dryers were constructed prior to the applicability date of April 23, 1986. Even though a construction permit modification was issued in 2003 (Construction Permit 1050014-004-AC), the changes authorized by that permit were not considered "modification" or "reconstruction" under the Subpart UUU definition.

Emissions Unit 004 (Flint Dryer No.2) is subject to the BACT determination issued November 6, 1979, in association with permit AC53-22724 in regards to particulate and visible emissions.

FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAPs).
- The facility has no units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is not a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.
- This facility is a synthetic non-Title V source for particulate matter less than 10 micrometers in diameter (PM_{10}). The emission limitations, restriction on hours of operation, restriction on the type or amount of material combusted, stored or processed in this permit will ensure that the facility's PM_{10} emissions will be below the threshold for a Title V source.

PERMIT HISTORY/AFFECTED PERMITS

This permit renews and replaces Operation Permit No. 1050014-006-AO and modifies Construction Permit No. 1050014-007-AC.

ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority - The permitting authority for this project is the Florida Department of Environmental Protection (Department), Southwest District Office's Permitting & Waste Cleanup Program. The mailing address and phone number is:

Florida Department of Environmental Protection
Southwest District Office
Permitting & Waste Cleanup Program
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-470-5700

All documents related to applications for permits shall be submitted to the above address.

2. Compliance Authority - The compliance authority for this project is the Florida Department of Environmental Protection (Department), Southwest District Office's Compliance and Enforcement Section - Attention: AIR. The mailing address and phone number is:

Florida Department of Environmental Protection
Southwest District Office
Compliance Assurance Program
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-470-5700

3. Appendices - The following Appendices are attached as part of this permit:

a. Appendix A. Citation Formats and Glossary of Common Terms;
b. Appendix B. General Conditions;
c. Appendix C. Common Conditions;
d. Appendix D. Common Testing Requirements; and
e. Appendix E. BACT Determination

4. Applicable Regulations, Forms and Application Procedures - Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions - For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time.
[Rule 62-4.080, F.A.C.]

6. Modifications - Unless otherwise exempt by rule, the permittee shall not initiate any construction, reconstruction, or modification at the facility and shall not install/modify any pollution control device at the facility without obtaining prior authorization from the Department. Modification is defined as: Any physical change or changes in the method of operations or addition to a facility that would result in an increase in the

actual emissions of any air pollutant subject to air regulations, including any not previously emitted, from any emission unit or facility.
[Rules 62-210.200 - Definition of "Modification" and 62-210.300(1)(a), F.A.C.]

7. Annual Operating Report - On or before **April 1** of each year, the permittee shall submit a completed DEP Form 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility" (AOR) for the preceding calendar year. The report may be submitted electronically in accordance with the instructions received with the AOR package sent by the Department, or a hardcopy may be sent to the Compliance Authority.
[Rule 62-210.370(3), F.A.C.]

8. Operation Permit Renewal Application - A completed application for renewal of the operation permit shall be submitted to the Permitting Authority no later than 60 days prior to the expiration date of the operation permit. To properly apply for an operation permit, the applicant shall submit the following:

a. the appropriate permit application form *(see current version of Rule 62-210.900, F.A.C. (Forms and Instructions), and/or FDEP Division of Air Resource Management website at: http://www.dep.state.fl.us/air/)*;

b. the appropriate operation permit application fee from Rule 62-4.050(4)(a), F.A.C.;

c. copies of the most recent compliance test reports required by Specific Condition Nos. A.11, B.9, C.11, D.11, and E.10, if not previously submitted; and

d. copies of the most recent month of records/logs specified in Specific Condition Nos. A.12, B.10, C.12, D.12, and E.11.

[Rules 62-4.030, 62-4.050, 62-4.070(3), 62-4.090, 62-210.300(2), and 62-210.900, F.A.C.]

FACILITY-WIDE REQUIREMENTS

OPERATION AND EMISSIONS LIMITATIONS

9. Fuel Oil Limitations - The facility's maximum total fuel oil usage is 600,000 gallons per any consecutive 12 month period (total is the combined usage of new No. 5 fuel oil and on-specification used fuel oil).
[Rule 62-4.070(3), F.A.C.; Construction Permit 1050014-004-AC]

10. General Standards: Unconfined Particulates - All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter in accordance with the provisions in Rule 62-296.320, F.A.C. These provisions are applicable to any source, including but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling. Reasonable precautions to control emissions of unconfined particulate matter at this facility shall include, but not be limited to the measures shown below, as needed.

a. posting and enforcing a 5 MPH speed limit;

b. curtailing operations during extremely windy conditions;

c. application of water.

d. Application of water to paved and unpaved areas accommodating vehicular traffic to prevent a visible particulate plume from being equal to or greater than 20% opacity.

e. Removal of particulate matter from buildings or work areas to prevent a visible particulate plume from being equal to or greater than 20% opacity.

f. Enclosure or covering of conveyor and screening systems where necessary to prevent a visible particulate plume from being equal to or greater than 20% opacity.

[Rules 62-4.070(3) and 62-296.320(4)(c), F.A.C.; Construction Permit 1050014-004-AC]

COMPLIANCE TESTING REQUIREMENTS

11. Compliance Tests – Once every five years prior to the renewal of the operation permit, each emissions unit shall be tested to demonstrate compliance with the emissions standards for PM and VE, except that testing shall not be required for Emission Unit 001 – Silica Dryer No. 1 (North) if operated for no more than 400 hours during a five year period as provided by Specific Condition No. A.8.
[Rule 62-297.310, F.A.C.]

12. Compliance Test Requirements - Compliance tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit.
[Rule 62-297.310, F.A.C.]

13. Compliance Test Methods - Required compliance tests shall be performed in accordance with the following reference methods.

Methods	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5	Determination of Particulate Matter Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources (EPA Method 9)

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

NOTIFICATION REQUIREMENTS

14. Test Notification - The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. The notification must include the following information: the date, time, and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company, and the telephone number of the person conducting the test.

(*Permitting Note - The notification should also include the relevant emission unit ID No(s)., test method(s) to be used, and pollutants to be tested.*)

[Rules 62-4.070(3) and 62-297.310(7)(a)9., F.A.C.]

A. EU No. 001 - Silica Dryer No. 1 (North) with a Dry Cyclone Separator

This section of the permit addresses the following emissions unit (EU).

EU ID No.	Emissions Unit Description
001	Silica Dryer No.1 (North) - This dryer has a maximum wet sand input rate of 40 tons/hour based on a daily average and a maximum heat input rate of 10.5 MMBTU/hr. Natural gas, new No. 5 fuel oil, or on-specification used fuel oil is used to fire the dryer. The fuel oil has a maximum sulfur content of 2.0% by weight. The dryer may use a maximum of 3,000 gallons of on-specification used fuel oil per any 12-consecutive month period. Particulate emissions are controlled with a Ducon 165 Model 700/125 dry cyclone separator. This dryer is only used as a backup to Emission Unit No. 002 - Silica Dryer No. 2.

PERFORMANCE RESTRICTIONS

A.1. Permitted Capacity - The maximum allowable permitted capacity is 40 ton of wet sand to the dryer per hour based on a daily average.
[Rule 62-210.200 F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

A.2. Restricted Operation - The maximum allowable hours of operation of the dryer are 4,700 hours per any 12 consecutive month period, of which only 4,100 hours of operation are allowed while burning fuel oil. The total combined hours of operation for Silica Dryer Nos. 1 and 2 shall not exceed 4,700 hours per any 12 consecutive month period, since Silica Dryer No. 1 only operates as a backup to Silica Dryer No. 2.
[Rule 62-210.200 F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

A.3. Authorized Fuel - The dryer shall be fired with natural gas, new No. 5 fuel oil, or on-specification used fuel oil.
[Rule 62-210.200 F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

A.4. Fuel Oil Limitations: The fuel oil fired in this dryer shall comply with the following:

a. The fuel oil shall have a maximum sulfur content of 2.0% by weight.

b. The dryer shall be fired with a maximum of 3,000 gallons of on-specification used fuel oil per any 12 consecutive month period.

c. Only used oil generated by the following Standard Sand & Silica Co. facilities shall be burned:
- Davenport Mine (Highway 17 & 92 North, Davenport, Polk County)
- Lake Wales Mine (Story Road, Lake Wales, Polk County)(deleted)(deleted)
- Lynne Mine (Silver Springs, Marion County)

d. The permittee shall not burn off-specification used oil. For each delivery of on-specification used oil, the vendor shall provide an analysis* documenting the fuel oil meets the following requirements of 40 CFR 761.20(e)(2) and (3) and 40 CFR 279.11 (July 1, 2004):

Constituent/Property	Allowable Level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogens	Shall not exceed 1000 ppm
Flash Point	100 degrees F minimum
PCB's	Shall be less than 2 ppm

e. The used oil to be burned shall be stored in a dedicated used oil storage tank (500 gallon capacity). A sample of the used oil shall be taken from each delivery. Within 15 days from the end of each calendar quarter (i.e., January – March, April – June, July – September, October – December), a composite of the samples taken during the quarter shall be analyzed for sulfur, arsenic, cadmium, chromium, lead, total halogens, flash point, ash content, BTU value, and PCB's* using EPA or ASTM approved methods. If the analysis for four consecutive quarters result in levels of arsenic, cadmium, chromium, lead, and total halogens that are below detectable limits or less than 10% of the specifications in c. above, the analysis frequency shall be semi-annual (i.e., January – June; July – December). The Department reserves the right to require more frequent analysis of the used oil.

* *A claim that used oil does not contain quantifiable levels of PCB's (that is, that the used oil contains less than 2 ppm of PCB's) must be documented by analysis or other information. The first person making the claim that the used oil does not contain PCB's is responsible for furnishing the documentation. The documentation can be tests, personal or special knowledge of the source and composition of the used oil, or a certification from the person generating the used oil claiming that the used oil contains no detectable PCB's.*

f. For each delivery of used oil to the dedicated used oil storage tank record:

(1) date of delivery and the amount delivered, in gallons;

(2) site of generation of the used oil (mine name and type of equipment); and

(3) documentation that the used oil contains less than 2 ppm PCB's (see d. and e. above).

g. In order to document continuing compliance with the fuel oil's maximum sulfur content limitation of 2.0% by weight, the permittee shall keep records on either vendor provided as-shipped analysis or on analysis of as-received samples taken at the plant. The analysis shall be determined by using an appropriate ASTM method.
[Rule 62-4.070(3), F.A.C.; Construction Permit 1040014-004-AC]

EMISSIONS STANDARDS

A.5. Particulate Matter (PM) Emission Limitation - The maximum allowable particulate matter emission rate from this dryer is 10.0 lbs./hr. (equivalent to 23.5 tons/yr.). This emission rate is applicable when the wet sand input rate to the dryer is greater than or equal to 5.25 tons/hr. When the wet sand input rate to the dryer is less than 5.25 tons/hr., the allowable emission rate shall be determined from the process rate table

in Rule 62-296.320(4)(a), F.A.C. by using the equation Allowable Emission Rate (lbs./hr.) = 3.59(input rate in tons/hr.)$^{0.62}$.
[Rule 62-296.320(4)(a), F.A.C.; Construction Permit 1050014-004-AC]

A.6. Visible Emission (VE) Limitation - Visible emissions from this dryer shall not be equal to or greater than 20% opacity.
[Rule 62-296.320(4)(b), F.A.C.]

A.7. Additional Reasonable Precautions – In addition to the reasonable precautions listed in Specific Condition No.10, the following precautions apply to this emissions unit (EU 001).

a. All sand is washed prior to drying to remove silts and clays that would normally be expected to cause fugitive emissions in the screening and loadout processes.

b. Screens are located inside a building, which minimizes re-entrained dust due to wind turbulence. The dust emissions are further controlled by a self-made wet scrubbing device, which exhausts inside the building. The device is checked during daily operations to ensure that water is being supplied to the unit and that the exhaust fan is operational.

[Rules 62-4.070(3), and 62-296.320(4)(c), F.A.C.]

COMPLIANCE TESTING REQUIREMENTS

A.8. Compliance Test Frequency - Since this dryer only operates as a backup to Silica Dryer No. 2, if the dryer is operated for more than 400 hours with either natural gas and/or fuel oil within a five year period, the dryer shall be tested for particulate matter and visible emissions, prior to the renewal of the facility's operation permit.
[Rule 62-297.320(7)(a)4., F.A.C.]

A.9. Fuel Used During Testing - A compliance test submitted when the dryer is fired with natural gas will automatically constitute an amended permit to allow the dryer to be fired with natural gas and up to 400 hours of firing fuel oil prior to triggering a requirement for additional testing. Within 30 days of exceeding the 400th hour of firing the dryer with fuel oil, new compliance tests shall be conducted with the dryer being fired with fuel oil.
[Rules 62-4.070(3) and 62-297.310, F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

A.10. Compliance Test Reports Records - Attach to each test report the following:

a. A copy of daily records for each test day

b. A copy of the monthly records for the month the test was conducted.

c. The **actual** input rate of wet sand to the dryer during the test period, in tons/hr.

d. If the test was conducted while firing new No. 5 fuel oil, submit a Certificate of Fuel Oil Analysis from the fuel oil vendor for the fuel burned during the test to document compliance with the sulfur content limitation.

e. If the test was conducted while firing on-specification used fuel oil, submit a Certificate of Fuel Oil Analysis for an oil sample taken during the test to document compliance with the on-specification used fuel oil limitations, PCB limitation, and sulfur content limitation.

[Rules 62-297.310(8) and 62-4.070(3) F.A.C.]

A.11. Recordkeeping Requirements - The permittee shall record the following:

Daily (operational day)

a. name, facility ID No., emission unit ID No., and description (i.e., Standard Sand & Silica Company, 1050014, EU 001, Silica Dryer No. 1);

b. date;

c. hours of operation for each type of fuel (natural gas & fuel oil);

d. total input of wet sand to the dryer, in tons;

e. daily average input rate of wet sand to the dryer, in tons/hr;

f. type of fuel burned;

g. quantity of on-specification used fuel oil burned, in gallons;

h. hours of burning fuel oil until the 400th hour was reached, if the most recent compliance test was conducted on natural gas;

Monthly

i. quantity of new No. 5 fuel oil burned for the month, in gallons;

j. quantity of on-specification used fuel oil burned for the month, in gallons;

k. total cumulative amount of on-specification used fuel oil burned for the most recent 12 consecutive month period, in gallons;

l. total cumulative amount of fuel oil (new No.5 fuel oil and on-specification used fuel oil) burned for the most recent 12 consecutive month period;

m. total hours of operation for the month for each type of fuel (natural gas & fuel oil);

n. total cumulative hours of operation for the most recent 12 consecutive month period for each type of fuel (natural gas & fuel oil);

o. total combined cumulative hours of operation for the most recent 12 consecutive month period for Silica Dryer No. 1 and Silica Dryer No. 2; and

p. total cumulative input of wet sand to the dryer, in tons.

[Rule 62-4.070(3), F.A.C.; Construction Permit 1050014-004-AC]

B. EU No. 002 - Silica Dryer No. 2 (South) with a Dry Cyclone Separator

This section of the permit addresses the following emissions unit (EU).

EU ID No.	Emissions Unit Description
002	Silica Dryer No.2 (South) - This dryer has a maximum wet sand input rate of 40 tons/hour based on a daily average and a maximum heat input rate of 10.5 MMBTU/hr. Only natural gas is used to fire the dryer. Particulate emissions from the dryer will be controlled with a Ducon 165 Model 700/125 dry cyclone separator.

PERFORMANCE RESTRICTIONS

B.1. Permitted Capacity - The maximum allowable permitted capacity is 40 ton of wet sand to the dryer per hour based on a daily average.
[Rule 62-210.200 F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

B.2. Restricted Operation - The maximum allowable hours of operation are 4,700 hours per any 12 consecutive month period. The total combined hours of operation for Silica Dryer Nos. 1 and 2 shall not exceed 4,700 hours per any 12 consecutive month period, since Silica Dryer No. 1 only operates as a backup to Silica Dryer No. 2.
[Rule 62-210.200 F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

B.3. Authorized Fuel - The dryer shall be only fired with natural gas.
[Rule 62-210.200 F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

EMISSIONS STANDARDS

B.4. Particulate Matter (PM) Emission Limitation - The maximum allowable particulate matter emission rate from this dryer is 10.0 lbs./hr. (equivalent to 23.5 tons/yr.). This emission rate is applicable when the wet sand input rate to the dryer is greater than or equal to 5.25 tons/hr. When the wet sand input rate to the dryer is less than 5.25 tons/hr., the allowable emission rate shall be determined from the process rate table in Rule 62-296.320(4)(a), F.A.C. by using the equation Allowable Emission Rate (lbs./hr.) = 3.59(input rate in tons/hr.)$^{0.62}$.
[Rule 62-296.320(4)(a), F.A.C.; Construction Permit 1050014-004-AC]

B.5. Visible Emission (VE) Limitation: Visible emissions from this dryer shall not be equal to or greater than 20% opacity.
[Rule 62-296.320(4)(b), F.A.C.]

B.6. Additional Reasonable Precautions – In addition to the reasonable precautions listed in Specific Condition No. 10, the following precautions apply to this emissions unit (EU 002).

a. All sand is washed prior to drying to remove silts and clays that would normally be expected to cause fugitive emissions in the screening and loadout processes.

b. Screens are located inside a building, which minimizes re-entrained dust due to wind turbulence. The dust emissions are further controlled by a self-made wet scrubbing device, which exhausts inside the building. The device is checked during daily operations to ensure that water is being supplied to the unit and that the exhaust fan is operational.

[Rule 62-296.320(4)(c), F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

B.7. Test Report Records - Attach to each test report the following:

a. A copy of daily records for each test day

b. A copy of the monthly records for the month the test was conducted.

c. The **actual** input rate of wet sand to the dryer during the test period, in tons/hr.

[Rules 62-297.310(8) and 62-4.070(3) F.A.C.]

B.8. Recordkeeping Requirements - The permittee shall record the following:

Daily (operational day)

a. name, facility ID No., emission unit ID No., and description (i.e., Standard Sand & Silica Company, 1050014, EU 002, Silica Dryer No. 2);

b. date;

c. hours of operation;

d. total input of wet sand to the dryer, in tons;

e. daily average input rate of wet sand to the dryer, in tons/hr;

Monthly

f. total hours of operation for the month;

g. total cumulative hours of operation for the most recent 12 consecutive month period;

h. total combined cumulative hours of operation for the most recent 12 consecutive month period for Silica Dryer No. 1 and Silica Dryer No. 2. (Also see Specific Condition No. A.12.o.);

i. type of fuel burned in the dryer;

j. total cumulative input of wet sand to the dryer, in tons; and

k. quantity of natural gas burned, in million cubic feet.

[Rule 62-4.070(3), F.A.C.; Construction Permit 1050014-004-AC]

C. EU No. 003 – Flint Dryer No. 1 (South) with a Dry Cyclone Separator

This section of the permit addresses the following emissions unit (EU).

EU ID No.	Emissions Unit Description
003	Flint Dryer No.1 (South) - This dryer has a maximum wet sand input rate of 36 tons/hour based on a daily average and a maximum heat input rate of 13.5 MMBTU/hr. Only natural gas or new No. 5 fuel oil having a maximum sulfur content of 2.0% by weight is used to fire the dryer. Particulate emissions are controlled with a Kehr dry cyclone separator. Dried sand exiting the dryer is transferred by a bucket elevator to 2 feeders. The feeders then transfer the sand to 2 screens, which either send the sand to a second set of 2 screens or directly to a storage bin. The 2 feeders and two sets of 2 screens are located in a building. The second set of 2 screens transfers the sand to 2 storage bins. Sand in the 2 storage bins is then conveyed to a truck loading station or railcar loading station on site. The truck and railcar loading stations do not operate simultaneously.

PERFORMANCE RESTRICTIONS

C.1. Permitted Capacity - The maximum allowable permitted capacity is 36 ton of wet sand to the dryer per hour based on a daily average.
[Rule 62-210.200, F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

C.2. Restricted Operations - The maximum allowable hours of operation are 6,300 hours per any 12 consecutive month period.
[Rule 62-210.200, F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

C.3. Authorized Fuel - The dryer shall be fired with natural gas or new No. 5 fuel oil having a maximum sulfur content of 2.0% by weight.
[Rule 62-210.200, F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

C.4. Fuel Oil Sulfur Content Documentation - In order to document continuing compliance with the sulfur content limitations, in % by weight, for new No. 5 fuel oil used to fire the dryer, the permittee shall keep records on either vendor provided as-shipped analysis or on analysis of as-received samples taken at the plant. The analysis shall be determined by using an appropriate ASTM method.
[Rule 62-4.070(3), F.A.C.; Construction Permit 1050014-004-AC]

EMISSIONS STANDARDS

C.5. Particulate Matter (PM) Emission Limitation - The maximum allowable particulate matter emission rate from this dryer is 15.0 lbs./hr. (equivalent to 47.25 tons/yr.). This emission rate is applicable when the wet sand input rate to the dryer is greater than or equal to 10 tons/hr. When the wet sand input rate to the dryer is less than 10 tons/hr., the allowable emission rate shall be determined from the process rate table in Rule 62-296.320(4)(a), F.A.C. by using the equation Allowable Emission Rate (lbs./hr.) = $3.59(\text{input rate in tons/hr.})^{0.62}$.
[Rule 62-296.320(4)(a), F.A.C.; Construction Permit 1050014-004-AC]

C.6. Visible Emission (VE) Limitation: Visible emissions from this dryer shall not be equal to or greater than 20% opacity.
[Rule 62-296.320(4)(b), F.A.C.]

C.7. Additional Reasonable Precautions - In addition to the reasonable precautions listed in Specific Condition No. 10, the following precautions apply to this emissions unit (EU 003).

a. All sand is washed prior to drying to remove silts and clays that would normally be expected to cause fugitive emissions in the screening and loadout processes.

b. Screens are located inside a building, which minimizes re-entrained dust due to wind turbulence. Exterior openings into the building are kept to a minimum and all exterior doors are kept closed when personnel are not in the building.

c. To minimize the effects of wind, chutes on truck and railcar loading are fitted with flexible hoses of sufficient length to extend into the top of the truck or railcar.

d. Only one truck or one railcar may be loaded at any given time.

[Rule 62-296.320(4)(c), F.A.C.; Construction Permit 1050014-004-AC]

COMPLIANCE TESTING REQUIREMENTS

C.8. Fuel Used During Testing - A compliance test submitted when the dryer is fired with natural gas will automatically constitute an amended permit to allow the dryer to be fired with natural gas and up to 400 hours of firing new No. 5 fuel oil prior to triggering a requirement for additional testing. Within 30 days of exceeding the 400th hour of firing the dryer with fuel oil, new compliance tests shall be conducted with the dryer being fired with fuel oil.
[Rules 62-4.070(3) and 62-297.310, F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

C.9. Records with Test Report - Attach to each test report the following:

a. A copy of daily records for each test day

b. A copy of the monthly records for the month the test was conducted.

c. The **actual** input rate of wet sand to the dryer during the test period, in tons/hr.

d. If the test was conducted while firing new No. 5 fuel oil, submit a Certificate of Fuel Oil Analysis from the fuel oil vendor for the fuel used during the test to document compliance with the sulfur content limitation.

[Rule 62-4.070(3), F.A.C.]

C.10. Recordkeeping Requirements - The permittee shall record the following:

Daily (operational day)

a. name, facility ID No., emission unit ID No., and description (i.e., Standard Sand & Silica Company, 1050014, EU 003, Flint Dryer No. 1);

b. date;

c. hours of operation;

d. total input of wet sand to the dryer, in tons;

e. daily average input rate of wet sand to the dryer, in tons/hr.;

f. type of fuel burned;

g. if the most recent compliance test was conducted on natural gas, record the hours of burning fuel oil until the 400th hour is reached;

Monthly

h. total hours of operation for the month;

i. total cumulative hours of operation for the most recent 12 consecutive month period;

j. total cumulative input of wet sand to the dryer, in tons;

k. quantity of new No. 5 fuel oil burned, in gallons;

l. most recent 12 consecutive month period total of new No. 5 fuel oil burned, in gallons; and

m. quantity of natural gas burned, in million cubic feet.

[Rule 62-4.070(3), F.A.C.]

D. EU No. 004 – Flint Dryer No. 2 (North) with a Dry Cyclone Separator followed by a Wet Scrubber

This section of the permit addresses the following emissions unit (EU).

EU ID No.	Emissions Unit Description
004	Flint Dryer No.2 (North) - This dryer has a maximum wet sand input rate of 65 tons/hour based on a daily average and a maximum heat input rate of 31.08 MMBTU/hr. Only natural gas or new No. 5 fuel oil having a maximum sulfur content of 2.0% by weight is used to fire the dryer. Particulate emissions are first vented to Ducon VM, Model 700 dry cyclone separator that vents to a Ducon UW-4, Model IV wet scrubber before being exhausted to the atmosphere. This dryer receives washed sand that has been further processed through a flotation plant. The flotation plant uses sulfuric acid and water to remove additional impurities. The impurities are floated out in the froth and diverted to waste. The processed wet sand is also referred to as "glass sand". The processed wet sand is transferred by a front-end loader to a surge bin and then to a vibrating feeder before entering the dryer. The sand exiting the dryer is transferred by 2 enclosed bucket elevators in series to 2 covered screens. Sand from the screens is then transferred to a partitioned storage silo. This silo is partitioned into a 250 ton west section and a 65 ton east section. Displace air from the silo vents back through its fill pipe. Sand from one partitioned side of the silo at a time is transferred to a truck loading station or a railcar loading station on site. The truck and railcar loading stations do not operate simultaneously.

PERFORMANCE RESTRICTIONS

D.1. Permitted Capacity - The maximum allowable permitted capacity is 65 ton of wet sand to the dryer per hour based on a daily average.
[Rule 62-210.200, F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

D.2. Restricted Operation - The maximum allowable hours of operation are 6,240 hours per any 12 consecutive month period.
[Rule 62-210.200, F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

D.3. Authorized Fuel - The dryer shall be fired with natural gas or new No. 5 fuel oil having a maximum sulfur content of 2.0% by weight.
[Rule 62-210.200, F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

D.4. Fuel Oil Sulfur Content Documentation - In order to document continuing compliance with the sulfur content limitations, in % by weight, for new No. 5 fuel oil used to fire the dryer, the permittee shall keep records on either on either vendor provided as-shipped analysis or on analysis of as-received samples taken at the plant. The analysis shall be determined by using an appropriate ASTM method.
[Rule 62-4.070(3), F.A.C.; Construction Permit 1050014-004-AC]

EMISSIONS STANDARDS

D.5. Particulate Matter (PM) Emission Limitation - The maximum allowable particulate matter emission rate from this dryer is 0.08 lbs/ton.

Permitting Note: The PM emission rate of 0.08 lbs/ton is equivalent to 5.2 lbs/hour at the permitted processing rate of 65 TPH.

[BACT determination issued November 6, 1979]

D.6. Visible Emission (VE) Limitation: Visible emissions from this dryer shall not be equal to or greater than 20% opacity.
[Construction Permit 1050014-004-AC]

D.7. Additional Reasonable Precautions - In addition to the reasonable precautions listed in Specific Condition No. 10, the following precautions apply to this emissions unit (EU 004).

a. In addition, to all sand being washed prior to drying to remove silts and clays, the sand processed in this dryer undergoes further cleaning in a flotation process that removes minerals and additional fine particles.

b. The exterior screens are fitted tightly with heavy duty tarpaulins to keep the product dry during screening operations and to minimize unconfined particulate matter. The tarpaulins are checked routinely and repaired or replaced if defective.

c. To minimize the effects of wind, chutes on truck and railcar loading are fitted with flexible hoses of sufficient length to extend into the top of the truck or railcar.

d. Only one truck or one railcar may be loaded at any given time.

[Rule 62-296.320(4)(c), F.A.C.; Construction Permit 1050014-004-AC]

COMPLIANCE TESTING REQUIREMENTS

D.8. Fuel Used During Testing - A compliance test submitted when the dryer is fired with natural gas will automatically constitute an amended permit to allow the dryer to be fired with natural gas and up to 400 hours of firing new No. 5 fuel oil prior to triggering a requirement for additional testing. Within 30 days of exceeding the 400th hour of firing the dryer with fuel oil, new compliance tests shall be conducted with the dryer being fired with fuel oil.
[Rules 62-4.070(3) and 62-297.310, F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

D.9. Records with Test Report - Attach to each test report the following:

a. A copy of daily records for each test day

b. A copy of the monthly records for the month the test was conducted.

c. The **actual** input rate of wet sand to the dryer during the test period, in tons/hr.

d. If the test was conducted while firing new No. 5 fuel oil, submit a Certificate of Fuel Oil Analysis from the fuel oil vendor for the fuel used during the test to document compliance with the sulfur content limitation.

[Rule 62-4.070(3), F.A.C.]

D.10. Recordkeeping Requirements - The permittee shall record the following:

Daily (operational day)

a. name, facility ID No., emission unit ID No., and description (i.e., Standard Sand & Silica Company, 1050014, EU 004, Flint Dryer No. 2);

b. date;

c. hours of operation;

d. total input of wet sand to the dryer, in tons;

e. daily average input rate of wet sand to the dryer, in tons/hr;

f. type of fuel burned;

g. quantity of fuel oil burned, in gallons; and

h. if the most recent compliance test was conducted on natural gas, record the hours of burning fuel oil until the 400th hour is reached.

i. Scrubber Information & Parameters;
   (1) Water flow rate (gpm);

   (2) Fan RPM.

   (3) The permittee shall report to the Air Compliance Section of this office on a calendar quarterly basis all instances where the above scrubber water flow measurements are less than 90% of the average level maintained during the most recent satisfactory compliance test. The report shall be submitted within 30 days of the calendar quarter;

Monthly

j. Total hours of operation for the month;

k. total cumulative hours of operation for the most recent 12 consecutive month period;

l. total cumulative input of wet sand to the dryer, in tons;

m. quantity of new No. 5 fuel oil burned, in gallons;

n. most recent 12 consecutive month period total of fuel oil burned, in gallons; and

o. quantity of natural burned, in million cubic feet.

[Rule 62-4.070(3), F.A.C.]

E. EU No. 005 – Truck Loading Operations (Silica Plant) with a Baghouse

This section of the permit addresses the following emissions unit (EU).

EU ID No.	Emissions Unit Description
005	Truck Loading Operations - Processed sand loaded into trucks at Truck Loading Station A (east) and Truck Loading Station B (west) is received from Silica Dryer No. 1, Silica Dryer No. 2, and/or the Flint Plant. Dried sand exiting Silica Dryer Nos. 1 and 2 is first transferred by a bucket elevator to 2 screens. From the 2 screens the sand is then transferred to either a second set of 2 more screens or to only 1 of 4 storage bins. The second set of 2 screens transfers sand to the 4 storage bins each designed to hold 40 tons of sand. Note - emissions from the bucket elevator and both sets of 2 screens located inside a building are controlled by a custom design wet scrubbing system that exhausts inside the building. Sand from the 4 storage bins is then transferred to 1 of 2 conveyor belts. The **higher conveyor** belt that receives sand from the four 40 ton storage bins transfers sand to a storage bin capable of storing 300 tons of sand. The 300 ton storage bin then transfers sand to Truck Loading Station A. The **lower conveyor** belt, which may also receive sand by trucks from the Flint Plant, transfers sand to 1 of 6 storage bins that are each capable of storing 70 tons of sand. Displaced air from storage bins 1, 2, 3, and 5 vent back through their respective fill pipes and storage bins 4 and 6 have separate vents to the atmosphere. Sand from the 6 storage bins is either re-screened and sorted by passing through a bucket elevator and covered screen or sent to a conveyor belt that transfers the sand to 1 of 2 bucket elevators. One bucket elevator transfers the sand to a bagging operation located inside a building and the second bucket elevator transfers the sand to Truck Loading Station B. Emissions from the 300 ton storage bin, Truck Loading Station A, bucket elevator for Truck Loading Station B, and Truck Loading Station B are controlled by a common Griffin Model SJA-56-C baghouse. Truck Loading Station A and B have a maximum truck loading rate of 192 tons/hr. and 131 tons/hr., respectively. Additionally, the total combined number of trucks that may be loaded at both truck loading stations is 25 trucks/day.

PERFORMANCE RESTRICTIONS

E.1. Permitted Capacity - The maximum total combined number of trucks that may be loaded at both truck loading stations shall not exceed 25 trucks/day.
[Rule 62-210.200, F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

E.2. Station A Loading Rate - Truck Loading Station A's maximum truck loading rate is 192 tons/hr.
[Rule 62-210.200, F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

E.3. Station B Loading Rate - Truck Loading Station B's maximum truck loading rate is 131 tons/hr.
[Rule 62-210.200, F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

E.4. Combined Loading Rate - The total combined truck loading rate for both truck loading stations shall not exceed 323 tons/hr.
[Rule 62-210.200, F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

E.5. Restricted Operation - Since the baghouse controls emissions from a 300 ton storage bin, bucket elevator, and both truck loading stations, the hours of operation of the baghouse shall not exceed 4,992 hours per any 12 consecutive month period.
[Rule 62-210.200, F.A.C. ("Potential to Emit"); Construction Permit 1050014-004-AC]

EMISSIONS STANDARDS

E.6. Visible Emission (VE) Limitation - Visible emissions from this emission unit shall not be equal to or greater than 20% opacity. In order to provide reasonable assurance that the baghouse is being properly operated, visible emissions should not exceed 5% opacity. Exceedance of the 5% limit shall not be a violation in and of itself, but an indication that additional control precautions, practice and/or stack testing may be necessary.
[Rules 62-4.070(3) and 62-296.320(4)(b), F.A.C.; Construction Permit 1050014-004-AC]

E.7. Additional Reasonable Precautions - In addition to the reasonable precautions listed in Specific Condition No. 10., the following precaution applies to this emission unit (EU 005).

- The sand bagging operation is located in the warehouse building, which minimizes re-entrained dust to wind turbulence. The small amount of emissions generated from the bagging operation are directed, uncontrolled, through the roof of the warehouse building via a fan and exhaust duct.

[Rule 62-296.320(4)(c), F.A.C.; Construction permit 1050014-004-AC]

COMPLIANCE TESTING REQUIREMENTS

E.8. Records with Test Report - Attach to each test report the following:

a. A copy of daily records for each test day

b. A copy of the monthly records for the month the test was conducted.

c. The **actual** truck loading rate for each truck loading station along with the total combined truck loading rate for both truck loading stations.

[Rule 62-4.070(3), F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

E.9. Records with Test Report - Attach to each test report the following:

a. A copy of daily records for each test day

b. A copy of the monthly records for the month the test was conducted.

c. The **actual** truck loading rate for each truck loading station along with the total combined truck loading rate for both truck loading stations.

[Rule 62-4.070(3), F.A.C.]

E.10. Recordkeeping Requirements: The permittee shall record the following:

Daily (operational day)

a. name, facility ID No., emission unit ID No., and description (i.e., Standard Sand & Silica Company, 1050014, EU 005, Truck Loading Operations);

b. date;

c. hours the baghouse operated;

d. total cumulative number of trucks loaded at both Truck Loading Stations A and B;

e. start time of loading each truck at each Truck Loading Station;

f. end time of loading each truck at each Truck Loading Station;

g. tons of sand loaded into each truck at each Truck Loading Station;

h. actual truck loading rate of each truck at each Truck Loading Station, in tons/hr;

i. if trucks are simultaneously loaded at both truck loading stations for any period of time, calculate and record the actual total combined truck loading rate for both truck loading stations over the simultaneous time period in tons/hr;

Monthly

j. total hours of operation of the baghouse for the month; and

k. total cumulative hours of operation of the baghouse for the most recent 12 consecutive month period.

[Rule 62-4.070(3), F.A.C.]