FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

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LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

FINAL PERMIT

PERMITTEE

Owens Corning Insulating Systems, LLC
2222 W. Bella Vista Street
Lakeland, FL 33810

Authorized Representative:
Mr. Jerry Lewis, Plant Leader

Air Permit No. 1050375-011-AC
Permit Expires: 12/31/2016
Lakeland Facility
Minor Air Construction Permit
Project: Addition of a new loosefill fiberglass insulation line and a small production line

This is the final air construction permit for construction of additional unbonded loosefill fiberglass insulation (ULF) fiberizers and expansion of related equipment, including an additional electric glass furnace. The existing emergency generator will also be replaced with a larger unit during the expansion. The proposed work will be conducted at the Owens Corning Insulating Systems Lakeland Facility (Standard Industrial Classification No. 3296). The facility is located in Polk County at 2222 W. Bella Vista Street in Lakeland, Florida. The UTM coordinates are Zone 17, 402.64 km East, and 3105.05 km North. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

This final permit 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, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution permit is 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 this permit. 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 this final permit, 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 Permit 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 below to the persons listed below.

Jerry Lewis, Plant Leader, Owens Corning Insulating systems, LLC, jerry.lewis@owenscorning.com

Carla Aducci, Managing Consultant, Trinity Consultants, cadduci@trinityconsultants.com

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Danielle Henry, Environmental Manager, DEP-SWD, Danielle.D.Henry@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

Fiberglass insulation manufacturing consisting of raw material handling, glass melting/refining and glass fiber forming to produce low density insulation products for the construction industry. The existing facility consists of the following emissions units (EUs).

Facility ID No. 1050375	
EU ID No.	Emissions Unit Description
001	Raw Material Handling w/baghouses (5)
002	Cold Top Electric Glass Furnaces (2)
003	Fiberglass Insulation Forming Process

Project Description and Affected/Proposed Emission

To add a new fiberglass insulation forming process similar to the existing process and a third smaller process line. An additional electric glass furnace is also included in the expansion. The existing exempt diesel-fired emergency generator will be replaced with a new generator subject to NSPS requirements. This project will create or modify the following emissions units (EUs).

EU ID No.	Emissions Unit Description
001	Raw Material Handling w/baghouses (5)
002	Cold Top Electric Glass Furnaces (3)
003	Fiberglass Insulation Forming Process
004	Emergency Generator

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 sources/activities are exempt under Rule 62-210.300.(3)(b) F.A.C.

- Packing operations including heat sealing, printing (ink) and printer cleaning
- Storage tanks including a 8,500 gallon mineral oil tank and two diesel storage tanks with a combined volume of 120 gallons.
- Cooling towers
- Emergency front end heating
- Road emissions
- Cullet handling
- Bag cutting
- Raw materials handling
- 150 kW diesel-fired emergency generator, 201 horsepower Onan Komatsu, Model Number: 0671TA

{Permitting Note: The exempt emergency generator listed above will be replaced by a 670 horsepower, 500 kW diesel powered generator that will be included in this and successive permits as EU No. 004}

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 a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.
- This facility is a Title V source for the pollutants PM, PM10, PM2.5 and CO and a PSD source for the pollutants PM, PM10, PM2.5 and CO.

{Permitting note: The process modifications approved in this permit will cause this previously synthetic minor facility to become a Title V major and a PSD source.}

PERMIT HISTORY/AFFECTED PERMITS

This permit replaces Construction Permit Nos. 1050375-003-AC and 1050375-008-AC. Reference current Operation Permit 1050375-010-AO.

ADMINISTRATIVE REQUIREMENTS

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

Florida Department of Environmental Protection
Southwest District Office
Air and Solid Waste Permitting 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 Assurance Program. 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

All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the above address.

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; and

d. Appendix D. Common Testing Requirements.

e. Appendix E. Appendix NESHAP 40 CFR 63 Subpart A – General Provisions

f. Appendix F. Appendix NESHAP 40 CFR 63 Subpart ZZZZ – Reciprocating Internal Combustion Engines

g. Appendix G. Appendix NSPS 40 CFR 60 Subpart A – General Provisions

h. Appendix H. Appendix NSPS 40 CFR 60 Subpart PPP – Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants

i. Appendix I. Appendix NSPS 40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

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. Annual Emissions Fee Form and Fee - This facility will become subject to Title V Annual Emissions Fees, in accordance with Rule 62-213.205, F.A.C., on the day EU No. 001, EU No. 002 or EU No. 003 resumes operation after modification. The annual Title V emissions fees are due (postmarked) by March 1st of each year. The completed form and calculated fee shall be submitted to: Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070. The forms are available for download by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site: http://www.dep.state.fl.us/air/emission/tvfee.htm.
[Rule 62-213.205, F.A.C.]

9. Application for Title V Air Operation Permit - This permit authorizes construction or modification of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for continued operation of the permitted emissions units. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation or commencing operation as modified. Commencing operation means setting into operation of any emissions unit for any purpose. To apply for a Title V air 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. a copy of the initial compliance test reports required by Specific Condition Nos. **A.10.** and **B.16**.; and

c. copies of the most recent month of records/logs specified in Specific Condition Nos. **B.10.**, **B.13.** and **B.14.**

The application shall be submitted to the Permitting Authority.
[Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

FACILITY-WIDE SPECIFIC CONDITIONS

The requirements of the following conditions of the permit apply facility-wide.

PERFORMANCE RESTRICTIONS

10. Operating Hours - This facility is permitted for continuous operation (i.e., 8,760 hours per year).
[Rules 62-4.070(3) and 62-210.200, F.A.C. (Potential to Emit)]

EMISSIONS STANDARDS

11. General Visible Emissions (VE) Standard - Except for emissions units that are subject to a unit specific visible emission (VE) limit set forth in a specific condition in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than 20 percent opacity. This includes all building openings and vents. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C.
[Rules 62-296.320(4)(b)1. and 4.a., F.A.C.]

(Permitting Note – The above condition expands on the requirements of Condition No. 8 of Appendix C (Common Conditions).)

12. General Pollutant Emission Limiting Standards: VOC Emissions - No person shall store, pump, handle process, load, unload, or use in any process or installation, volatile organic compounds (VOC) or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary by the Department. All equipment, pipes, hoses, lids, fittings, etc., shall be operated and maintained in such a manner as to minimize leaks, fugitive emissions and spills of paints and solvent materials. All solvents from solvent washings shall be directed into containers that prevent evaporation into the atmosphere.
[Rule 62-296.320(1)(a), F.A.C.]

(Permitting Note – The above condition expands on the requirements of Condition No. 6 of Appendix C (Common Conditions).)

A. EU Nos. 001 Raw Material Handling & 002 Cold Top Electric Glass Furnace

This section of the permit addresses the following emissions units (EUs).

EU ID No.	Emission Unit Description	Baghouse ID	Baghouse Location & Function	Emission Control Device Description
001	Raw Material Handling	Baghouse No. 1	located on top of Bin No. 1 and controls emissions from Bin Nos. 1 and 2B	Model No. 49S-8-20-TR-B Mikropul–Mikro-Pulsaire Bin Vent fabric filter baghouse
		Baghouse No. 2	located on top of Bin No. 2A and controls emissions only from Bin No. 2A	Model No. 49S-8-20-TR-B Mikropul–Mikro-Pulsaire Bin Vent fabric filter baghouse
		Baghouse No. 3	located on top of Bin No. 3 and controls emissions from Bin Nos. 3, 4, 5, 7, 10 and 11	Model 16AVS6 AirLanco Bin Vent fabric filter baghouse
		Scale Hopper/Mixer /Furnace Dust Bin Baghouses	to control emissions from ingredient scale hopper, mixer, and transfer of collected dust material to furnace dust bin and/or furnace running bin	Flex-Kleen-Model 22/36 PVTL-36(IIIG) baghouse and Dynamic Air model 343-400 bin vent filter
002	Cold Top Electric Glass Furnaces	Furnace No. 1, Furnace No. 2 and Furnace No. 3 Baghouses	to control emissions from furnaces	Separate high temperature baghouses (one for each furnace)

More Detailed Emission Unit (EU) Descriptions -

Raw Material Handling (EU No. 001)

The primary raw material used to manufacture the glass is sand. Other raw material such as anhydrous borax, silica, limestone, dolomite, sodium sulfate, soda ash, and cullet (recycled waste glass material) are mixed with the sand in varying quantities. *(Note: Niter will not be used as an ingredient in the mixed glass formulation.)* To the extent possible, raw materials will be free of arsenic and sulfates. Raw materials are delivered via rail car or truck for large volume supplies and in drums or bags for smaller volume supplies. Pneumatic and vibrator/gravity systems are used to unload the bulk raw materials to nine (9) storage silos/bins (Bin Nos. 1, 2A, 2B, 3, 4, 5, 7, 10, and 11). Bulk raw materials are gravity-fed through a fabric tube to a scale (weigh) hopper and then dropped to a mixer for blending. A furnace dust bin receives dust collected by the furnace baghouse dust collectors (EU No. 002) for recycling back as a batch ingredient. These operations take place inside the manufacturing building.

Particulate matter (PM/PM_{10}) emissions from the bulk raw material transfer operations to the material storage silos/bins are controlled by two (2) Model No. 49S-8-20-TR-B Mikropul–Mikro-Pulsaire Bin Vent fabric filter baghouses each with a design maximum gas flow rate of 2,800 acfm*; and one (1) Model 16AVS6 AirLanco Bin Vent fabric filter baghouse with a design maximum gas flow rate of 1,250 acfm* Each baghouse sits on the

top of one silo/bin which it controls emissions from, but the duct system that connects the silo/bin vents to the baghouses is such that two of the baghouses can serve more than one baghouse silo/bin exhaust vent (*see EU information table above).*

> *(* Baghouse Air Flow Rates Note - These values represent baghouse capacities only, not the air flow rate at which the baghouses are actually operated. The pneumatic transfer system used to deliver glass batch material to the silos/bins transfers material using a maximum airflow rate of 500 acfm.)*

Dust that is evolved from filling the scale (weigh) hopper and filling the mixer is contained and collected by a ventilation system which exhausts to a Flex-Kleen Model 22/36 PVTL-36 (IIIG) pulse jet fabric filter baghouse dust collector with a design maximum air flow rate of 2,500 acfm and a Dynamic Air 343-400 bin vent filter. The Flex-Kleen baghouse dust collector also acts as a filter receiver for transfer of material from the furnace baghouse dust collectors (EU No. 002) to the furnace dust bin. This baghouse is designated as the Weigh Hopper/Mixer/Furnace Dust Bin Baghouse.

Melting in Cold Top Electric Furnaces (3) (EU No. 002)

After weighing and mixing, the raw materials are conveyed pneumatically to three (3) running bins. From the running bins the material is mechanically charged via augers and chutes into the three (3) cold top electric melting furnaces where molten glass is formed. The raw materials are dropped into the furnace within sealed tubes that extend to a point very close to the batch-molten glass interface, thereby minimizing splashing effect and batch turbulence within the melter. The molten glass leaves the furnace and passes through the enclosed riser and the forehearth where it is cooled to the proper temperature for forming. The risers and the forehearths are sealed to eliminate emissions.

Particulate matter (PM/PM_{10}) emissions from raw material transfer to and operation of melting furnace No. 1 and 2 are controlled by Flex-Kleen Model22/36 PVTL-36(IIIG) pulse jet high temperature fabric filter baghouse dust collectors (one for each furnace) each with a design maximum air flow rate of approximately 7,300 acfm exhausting through one common exhaust stack. Proposed Furnace No. 3 emissions are controlled by a third 7,300 acfm baghouse, exiting through a dedicated exhaust stack. These three furnace baghouses can also serve as filter receivers for the furnace running bins whose emissions are primarily controlled by a set of four ModulKleen bin vent filters on each bin.

Dust collected in the furnace baghouses is transferred to the furnace dust bin or to each furnace's running bin for recycling back into the process. The Weigh Hopper/Mixer/Furnace Dust bin Baghouse (part of EU No. 001) also acts as a filter receiver/dust collector for the material transfer to the furnace dust bin .

PERFORMANCE RESTRICTIONS

A.1. Baghouse Emission Control Device Circumvention and Operation - The permittee shall not circumvent any air pollution control device or allow the emissions of air pollutants without the applicable air pollution control device (baghouses) operating properly. The raw material handling (EU No. 001) bin vent filter baghouses (Baghouse Nos. 1, 2, and 3) shall be operating any time raw materials are being transferred to a silo controlled by that baghouse. The Scale Hopper/Mixer/Furnace Dust Bin Baghouse (EU No. 001) shall be operating any time that the scale hopper or mixer is in operation, or material is being transferred to the furnace dust bin. The melting furnace (EU No. 002) baghouses shall be in service and operating properly any time the cold top electric melt furnaces are in operation. [Rules 62-4.070(3) and 62-210.650, F.A.C.]

EMISSIONS STANDARDS

A.2. Visible Emission Limitation - In order to provide reasonable assurance the baghouses are being maintained and operated properly, visible emissions from each of the baghouse exhaust stacks/vents shall not exceed 5% opacity.
[Rule 62-4.070(3), F.A.C.]

COMPLIANCE TESTING REQUIREMENTS

A.3. Initial Compliance Tests – Bag House Nos. 1, 2, 3 and the Scale Hopper/Mixer/Furnace Dust Bin Baghouse contained in EU No. 001 and Furnace No. 3 Baghouse contained in EU No. 002 shall be tested to demonstrate initial compliance with the emissions standards for visible emissions. The initial tests shall be conducted no later than 60 days after initial operation of the unit.
[Rules 62-4.070(3) and 62-297.310(7)(a)1., F.A.C.]

A.4. Compliance Tests - During each federal fiscal year (October 1st to September 30th), the emissions unit shall be tested to demonstrate compliance with the emissions standards for visible emissions. Each of the baghouse exhaust stacks/vents included in EU Nos. 001 and 002 shall be tested to demonstrate compliance with the visible emissions (VE) standard of Specific Condition No. **A.2.**
[Rule 62-297.310, F.A.C.]

A.5. 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.]

A.6. Compliance Test Method - Required compliance tests shall be performed in accordance with the following reference method.

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources The visible emissions test shall be a minimum of thirty (30) minutes in duration.

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

A.7. Operation During Baghouse Exhaust Stack VE Compliance Testing - Visible emissions (VE) testing of baghouse emission control device exhaust stacks shall be conducted during normal operation and shall include the period during which the highest opacity can reasonably be expected to occur. Operations to be conducted during the testing shall be as shown in the table below. Operation rates shall be subject to requirements of Item 1 of Appendix D, Common Testing Requirements

EU ID No.	EU Description	Baghouse ID	Operations during testing
001	Raw Material Handling	Baghouse No. 1	transfer of material to Bin Nos. 1 or 2B
		Baghouse No. 2	transfer of material to Bin No. 2A
		Baghouse No. 3	transfer of material to Bin. Nos. 3, 4, 5, 7, 10 or 11
		Scale Hopper /Mixer /Furnace Dust Bin Baghouse	normal batch operation of scale hopper and mixer, and normal transfer of material to the Furnace Dust Bin and/or Furnace Running Bin
002	Cold Top Electric Glass Furnaces (3)	Furnace No. 1, Furnace No. 2 and Furnace No. 3 Baghouses	operation of furnace being controlled by the baghouse

[Rule 62-297.310(4)(a)2., F.A.C.]

(Permitting Note – The above condition expands on the requirements of Item 2 of Appendix D (Common Testing Requirements).)

NOTIFICATION REQUIREMENTS

A.8. Compliance 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:

a. the date, time, and location of each test;

b. the emission unit, specific emission point, pollutant to be tested and method to be used;

c. the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and

d. the name, company, and the telephone number of the person conducting the test.

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

A.9. Notification of Operation Commencement - The permittee shall notify the Compliance Authority in writing of the date of commencing operation of the EU Nos. 001 & 002 after completing the modifications authorized by this permit, no later than fifteen (15) days after that date. Commencing operation means setting into operation of any emissions unit for any purpose.
[Rules 62-4.070, and 62-210.200, F.A.C., (definition of Commence Operation)]

REPORTING REQUIREMENTS

A.10. Compliance Test Reports - The permittee shall prepare and submit reports for all required compliance tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. The report shall include a description of material handling or production equipment in operation during the testing period, along with estimated operating/transfer rate (tons or pounds/hour). [Rule 62-297.310(8), F.A.C.]

B. EU No. 003 Fiberglass Insulation Forming Process

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

EU ID No.	Emissions Unit Description	Zone	Emission Control Device Description
003	Fiberglass Insulation Forming Process	Unbonded Zone A	60,000 acfm venturi scrubber
		Unbonded Zone B	44,000 scfm venturi scrubber
		Unbonded Zone C	60,000 acfm venturi scrubber

In the forming process, the molten glass then enters the fiberizers where glass fibers are formed by a rotary spin process that uses centrifugal force to move the glass through small holes in the walls of a swiftly moving cylinder. An air stream then breaks the fibers into pieces. The fiberizers each include a 2.0 MMBtu/hour natural gas fired burner to provide heat. A maximum of eleven (11) fiberizers, with a total capacity of of 12,500 lb/hr is permitted.

The unbonded glass fiber's formed pack does not have to be cured or cooled, and therefore is sent directly from forming to the fabrication and packaging area. A light spray coating (mineral oil, silicon, anti-static material, pigment and possibly a coupling agent) is sprayed on the unbonded glass fibers. In order to minimize particulate matter emissions, this application will be done in the transport (from forming area to hammermill) duct if feasible (otherwise it is applied in the forming area).

In the Product Packaging area, the product is placed in a hammermill under negative pressure and the chopped product is pneumatically transported to a separator which separates the fiberglass wool from the air and drops the product into an enclosed bagging system located below the separator. The transport air is exhausted through the forming hood. All of the above fabrication (milling) and packaging operations take place in an enclosed building under negative pressure created by the forming fans, which route approximately 100,000 acfm of ambient air into the building and then out through the venturi scrubbers (3) and common exhaust stack.

Cullet material (scrap solid glass) material is recycled back into the melt furnaces to be reformed into molten glass (furnaces batches can use up to 40% cullet).

Emissions (particulate matter (PM)) from the forming operations are controlled by three (3) venturi scrubbers - Scrubber No. 1 (Unbonded Zone A), Scrubber No. 2 (Unbonded Zone B), and Scrubber No. 3 (Unbonded Zone C). Two of the scrubbers (Scrubber Nos. 1 and 3) have a design air flow rate of 60,000 acfm, while the other scrubber (Scrubber No. 3) has a design air flow rate of 44,000 acfm. All three scrubbers are ducted together and discharge to one 130-foot tall, 11-foot diameter common exhaust stack. (Note - The scrubbers were built in-house based on fiberglass insulation industry standard designs for these applications.)

PERFORMANCE RESTRICTIONS

B.1 Federal 40 CFR 60 NSPS (New Source Performance Standards) Requirements – This emission unit is subject to and shall comply with the applicable requirements *(as identified below)* of 40 CFR 60 Subpart PPP (Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants), which is adopted and incorporated by reference in Rule 62-204.800(8)(b)68., F.A.C., and made a part of this permit in Section 4., Appendix E - NSPS 40 CFR 60 Subpart PPP (Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants); and the 40 CFR 60 Subpart A General Provisions requirements contained in Section 4., Appendix F - NSPS 40 CFR 60 Subpart A (General Provisions for 40 CFR 60). Subpart PPP applies to the rotary spin wool fiberglass insulation manufacturing line (EU No. 003), which consists of the manufacturing equipment comprising the forming section, where molten glass is fiberized and a fiberglass pack is formed.

40 CFR 60 Subpart PPP Applicable Provision References [1, 2]

(Entire section applies unless otherwise noted in italics after the section title.)

§ 60.680 Applicability and designation of affected facility.

§ 60.681 Definitions.

§ 60.682 Standard for particulate matter.

§ 60.683 Monitoring of Operations, *60.683(a) and (c)*

§ 60.684 Recordkeeping and reporting requirements, *all except 60.684(b)*

§ 60.685 Test methods and procedures.

[1] *(NSPS Applicability Note - These applicability references are based upon the operations as reflected in the operation permit renewal application submitted on 06/03/13. Any change in operations may change the applicable provisions.)*

[2] *(NSPS 40 CFR 60 Subpart PPP Permitting Note - For accessibility, the key emission limitation, testing, recordkeeping and reporting requirements from Subpart PPP are also shown in some of the specific conditions of this permit (see Specific Condition Nos. B.3., B.4.b., B.8. through B.13., and B.15. through B.17.). The permittee must meet all of the applicable 40 CFR 60 Subpart PPP and Subpart A requirements included in the attached appendices regardless of whether they are also shown in the permit specific conditions.)*

[Rule 62-204.800(8)(b), F.A.C.; NSPS 40 CFR 60 Subpart PPP and Subpart A]

B.2. Production Limitation – Production of glass fibers from the fiberizers shall not exceed 54,750 tons of glass pulled in any consecutive 12-month period.
[Rule 62-210.200, F.A.C. (Potential to Emit); Application received 06/05/2014]

B.3. Emission Control System Circumvention and Operation (Venturi Scrubbers) – The permittee shall not circumvent any air pollution control devices or allow the emissions of air pollutants without the applicable air pollution control devices (wet venturi scrubbers) operating properly. The forming process venturi scrubbers (Scrubber Nos. 1, 2, and 3) shall be in service and operating properly at all times that the forming zone controlled by the scrubber is in operation. In order to provide reasonable assurance the scrubbers are being maintained and operated properly, the following control device operating parameters shall be maintained at or above the following minimum levels during all periods of process operation*;

a. Minimum pressure drop across each scrubber - 70% of the lowest pressure recorded for that scrubber during the most recent successful (i.e., showed compliance with all permit limitations) compliance stack test**.

b. Minimum scrubbing water flow rate for each scrubber - 70% of the lowest water flow rate recorded for that scrubber during the most recent successful compliance stack test**.

(Recordkeeping Note: See Specific Condition B.10. for scrubber parameter recordkeeping.)*

*(** NSPS Subpart PPP Note - For the purposes of compliance with 40 CFR 60 Subpart PPP, scrubber control device operating parameter exceedances are defined as any monitoring data that are less than 70 percent of the lowest value or greater than 130 percent of the highest value of each of the operating parameters recorded during the most recent compliance test. (See exceedance reporting requirement in Specific Condition B.16. and 40 CFR 60.684(d) in Appendix NSPS 40 CFR 60 Subpart PPP).)*

[Rules 62-4.070(3), 62-204.800(8)(b), and 62-210.650, F.A.C.; NSPS Subpart PPP 40 CFR 60.684(d)]

EMISSIONS STANDARDS

B.4. Particulate Matter (PM) Emission Limitations - Emissions of particulate matter (PM) from the forming process scrubbers common exhaust stack shall not exceed the following levels:

a. Requested by Permittee to Limit Potential to Emit - 4.5 pounds/ton of glass pulled; [Rule 62-210.200, F.A.C. (Potential to Emit)]

b. NSPS Subpart PPP Emission Standard - 11.0 pounds/ton of glass pulled*. [Rule 62-204.800(8)(b), F.A.C.; NSPS Subpart PPP 40 CFR 60.682]

*(*NSPS 40 CFR 60 Subpart PPP Note - The 4.5 pounds/ton limit contained in Specific Condition B.4.a. above requested by the permittee is more stringent than the 11.0 pounds/ton of glass pulled NSPS Subpart PPP limitation, and therefore compliance with the 4.5 pounds/ton of glass pulled standard will also show compliance with the NSPS Subpart PPP standard of Specific Condition No. B.4.b.*

B.5. Emission Limit Averaging Time - The averaging time for the pounds/ton emission limitations shall be the averaging time in the applicable compliance stack test method. [Rule 62-4.070(3), F.A.C.]

COMPLIANCE TESTING REQUIREMENTS

B.6. Initial Compliance Tests - Forming Process Scrubber Common Stack Testing - In order to document initial compliance with the emission limitations of Specific Condition **B.4.** the forming process scrubbers common exhaust stack shall be tested for particulate matter (PM). The initial tests shall be conducted no later than 60 days after initial operation of the unit.
[Rules 62-4.070(3) and 62-297.310(7)(a)1., F.A.C.]

B.7. Compliance Test after Initial Testing - Forming Process Scrubbers Common Stack PM Testing – In order to document continuing compliance with the emission limitations of Specific Condition B.4. the forming process scrubbers common exhaust stack shall be tested for particulate matter (PM) once every 2 years sometime during every other calendar year.
[Rules 62-4.070(3) and 62-297.310(7), F.A.C.]

B.8. Compliance Test Requirements - Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. Additionally, compliance tests on the forming process scrubber's common stack shall be conducted while the product with the highest loss on ignition (LOI) expected to be produced by that line is being manufactured, unless prior written approval is received from the Department for alternative testing conditions. If feasible, testing shall be conducted while operating at 90-100% of the total production (pull) rate of 12,500 pounds glass per hour. The tested fiberizers production (pull) rate shall be the average pounds per hour production rate over the actual test period.
[Rule 62-297.310, F.A.C.]

B.9. Compliance Test Methods - Required tests shall be performed in accordance with the following reference method(s).

Method(s)	Description of Method and Comments
EPA 1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
EPA 5E	Determination of Particulate Matter Emissions from the Wool Fiberglass Insulation Manufacturing Industry. The sampling time and sample volume shall be at least 120 minutes and 2.55 dscm (90.1 dscf). The probe and filter holding heating system may be set to provide a gas temperature of no greater than 177 $\pm$ 14 ° C (350 $\pm$ 25 °F). [NSPS Subpart PPP 40 CFR 60.685(c)(2)]

The above EPA methods are described in Appendix A of 40 CFR 60 (Methods 1-4, and 5E), and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department.
[Rules 62-204.800 and 62-297.100, F.A.C.; NSPS Subpart PPP 40 CFR 60.685(c)(2); Appendix A of 40 CFR 60]

MONITORING REQUIREMENTS

B.10. Monitoring of Operations (NSPS 40 CFR 60 Subpart PPP) - An owner or operator who uses a wet scrubbing control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the gas pressure drop across each scrubber and the scrubbing liquid flow rate to each scrubber. The pressure drop monitor is to be certified by its manufacturer to be accurate within ± 250 pascals (±1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within ±5 percent over its operating range. All monitoring devices are to be recalibrated quarterly in accordance with procedures under 40 CFR 60.13(b). [Rule 62-204.800(8)(b), F.A.C.; NSPS Subpart PPP 40 CFR 60.683(a) and (c))]

NOTIFICATION REQUIREMENTS

B.11. Compliance 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:

a. the date, time, and location of each test;

b. the emission unit, specific emission point, pollutant to be tested and method to be used;

c. the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and

d. the name, company, and the telephone number of the person conducting the test.

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

B.12. Notification of Operation Commencement - The permittee shall notify the Compliance Authority in writing of the date of commencing operation of the EU Nos. 003 after completing the modifications authorized by this permit, no later than fifteen (15) days after that date. Commencing operation means setting into operation of any emissions unit for any purpose.
[Rules 62-4.070, and 62-210.200, F.A.C., (definition of Commence Operation)]

RECORDKEEPING AND REPORTING REQUIREMENTS

B.13. Forming Process Scrubber Operating Parameter Records – The permittee shall record the measurements required by 40 CFR 60.683(a) (i.e., pressure drop across each forming process scrubber (i.e., Scrubber Nos. 1, 2, and 3) and the scrubbing liquid flow rate to each scrubber *(see Specific Condition B.10.* at the following frequency:

a. during compliance testing - at 30-minute intervals during each 2-hour test run of each performance test of a wet scrubber control device;

b. during normal production - at least once every 4 hours.

[Rule 62-204.800(8)(b), F.A.C.; 40 CFR 60.684(a), *(see App. NSPS 40 CFR 60 Subpart PPP)*]

B.14. Forming Process Production Records - In order to document compliance with the production/operating rate limitations of Specific Conditions **B.2**. and **B.8.**, the permittee shall maintain records of the following:

Daily *(if required*)*

a. date of record;

b. total production of fiberglass (glass pulled) from all fiberizers;

(Note - Daily recordkeeping is only required if the production rate during the most recent PM compliance testing was less than 90-100% of the total production rate of 12,500 pounds glass/hour, which would establish a daily operating rate limitation of 110% of the tested rate (see Specific Condition B.8.)*

Monthly

c. calendar month of record;

d. total fiberglass production (glass pulled) for the month, and for the most recent 12-consecutive month period (tons/month and tons/12 consecutive months).

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

B.15. General Recordkeeping Requirements – All required records shall be recorded on-site in a permanent form suitable for inspection and made available to the Department upon request, and shall be retained at the facility for at least a three (3) year period.
[Rules 62-4.070(3), and 62-204.800(8)(b), F.A.C.; NSPS Subpart PPP 40 CFR 60.684(c)]

B.16. Compliance Test Reports - The permittee shall prepare and submit reports for all required compliance tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. The forming process scrubbers common stack particulate matter (PM) compliance test reports shall also include the following operating and control device data for the period during which the testing was being conducted.

a. Operating Information:

1). number of fiberizers in operation during test;

2). glass production rate (pounds of glass pulled/hour) for the fiberizers; and
[40 CFR 60.685(c)(3)]

3). the location where the light coating spray was applied to the unbonded product during the test period (i.e., in the forming area or in the Forming area to hammermill transport duct), and, if it is applied in the Forming area, the rate of application (in whatever units are standard for way that the application rate is quantified and controlled).

b. Scrubber Operating Parameter Data (for each scrubber)* *(see also Condition B.13.)*:

1). scrubber pressure drop (inches H_2O) taken at 30 minute intervals during each run of compliance test; [40 CFR 60.685(d)]

2). scrubber liquid flow rate (gallons/minute) taken at 30 minute intervals during each run of compliance test; [40 CFR 60.685(d)]

3). a description of the type of water/scrubber liquid being used in the scrubbers during the stack test (e.g., once-through water; recycled untreated closed loop water; cleaned and/or treated recycled water (with a description of any chemical(s) added to the water; etc).

4). the average scrubber pressure drop (inches H_2O) and liquid flow rate (gallons/minute) for each scrubber for the test period based on 1). and 2). above*.

(Note - The average scrubber operating values for each scrubber during the compliance testing will be used to establish the minimum required operating values during subsequent production (see Specific Condition B.3.)*

Failure to include the above data with the test report, or operating at conditions which do not reflect the normal operating conditions, may invalidate the test.
[Rules 62-4.070(3), 62-204.800(8)(b), and 62-297.310(8), F.A.C.; NSPS Subpart PPP 40 CFR 60.685]

B.17. Control Device Operating Parameter Exceedances (NSPS 40 CFR 60 Subpart PPP) - The permittee shall submit written semiannual reports of exceedances of control device operating parameters required to be monitored by paragraphs (a) and (b) of 40 CFR 60.684 and written documentation of, and a report of corrective maintenance required as a result of, quarterly calibrations of the monitoring devices required in 40 CFR 60.683(c) *(i.e., monitoring devices that measure the gas pressure drop across each forming process scrubber and the scrubbing liquid flow rate to each scrubber).* For the purpose of these reports, exceedances are defined as any forming process scrubber operating parameter monitoring data that are less than 70 percent of the lowest value or greater than 130 percent of the highest value of each operating parameter recorded during the most recent compliance test.
[Rule 62-204.800(8)(b), F.A.C.; NSPS Subpart PPP 40 CFR 60.684(d)]

C. EU No. 004, Diesel Fired Emergency Generator

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

EU ID No.	Emissions Unit Description
004	670 hp, 500 KW Diesel Powered Emergency Generator

This engine will only be operated for maintenance and readiness testing and in emergency situations.

{Permitting Note: This is a "new" stationary emergency CI RICE with a displacement of less than 10 liters per cylinder, located at an area source of HAP, that commenced construction on or after 6/12/2006, and that has a post-2007 model year. }

PERFORMANCE RESTRICTIONS

C.1. Federal Regulatory Requirements - This emission unit is subject to 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines and 40 CFR 63, Subpart ZZZZ – Reciprocating Internal Combustion Engines, which are adopted by reference in Rule 62-204.800, F.A.C.
***{Permitting Note**: In accordance with provisions of 40 CFR 63.6590(c)(6), meeting the requirements of 40 CFR 60, Subpart IIII, satisfies compliance with the requirements of Subpart ZZZZ.}*
[Rule 62-204.800(8) and Rule 62.800(11), F.A.C.]

C.2. Authorized Fuel. These Stationary Reciprocating Internal Combustion Engines (RICE) must use diesel fuel that meets the following requirements for non-road diesel fuel:

a. *Sulfur Content*. The sulfur content shall not exceed = 15 ppm = 0.0015% by weight (ultra low sulfur) for non-road fuel.
b. *Cetane and Aromatic*. The fuel must have a minimum cetane index of 40 or must have a maximum aromatic content of 35 volume percent.
c. *Marking Provisions.* The diesel fuel fired shall be free of marker solvent yellow 124 until November 30, 2014. After December 1, 2014, there are no requirements or restrictions on the use of marker solvent yellow 124.
d. *Use of Existing Fuel*. Any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

[40 CFR 60.4207(b), 80.510(c), 80.510(f)(2) & 80.510(f)(7) and Rule 62-210.200 (definition of Potential to Emit), F.A.C.]

C.3. Restricted Operation -

a. *Maintenance and Testing*. These engines are authorized to operate for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year.
b. *Emergency Situations*. There is no time limit on the use of emergency stationary RICE in emergency situations.
c. *Non-emergency Situations*. These engines may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing.
d. *Other Situations*. These engines cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity.

[Rules 62-4.070(3) and 62-210.200 (definition of Potential to Emit), F.A.C.]

C.4. Operation and Maintenance. The owner or operator must operate and maintain the stationary CI internal combustion engines according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. These RICE must be maintained and operated to meet the emissions limits in Specific Conditions C**.5.** - C**.7.** over the entire life of the engine. [40 CFR 60.4206, 4211(a)(1), (2) & (3)]

EMISSIONS STANDARDS

C.5. NO_X + NMHC Emissions - Emissions of NO_X plus non-methane hydrocarbons shall not exceed 4.0 grams per kilowatt hour (g/kW-hr).
[40 CFR 60.4202(a)(2), 4205(b) and 89.112(a)]

C.6. CO Emissions - Carbon monoxide (CO) emissions shall not exceed 3.5 grams per kilowatt hour (g/kW-hr).
[40 CFR 60.4202(a)(2), 4205(b) and 89.112(a)]

C.7. PM Emissions - Particulate matter (PM) emissions shall not exceed 2.0 grams per kilowatt hour (g/kW-hr).
[40 CFR 60.4202(a)(2), 4205(b) and 89.112(a)]

COMPLIANCE TESTING REQUIREMENTS

C.8. Engine Certification Requirements. The owner or operator must comply with the emissions standards specified above by having purchased an engine certified by the manufacturer to meet those limits. The engine must have been installed and configured according to the manufacturer's emission-related specifications, except as permitted in Specific Condition **C.9.**
[40 CFR 60.4211(c)]

C.9. Compliance Requirements Due to Loss of Certification. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.
[40 CFR 60.4211(g)(3)]

C.10. Testing Requirements. In the event performance tests are required pursuant to Specific Condition C**.9.**, the following requirements shall be met:

a. *Testing Procedures*. The performance test must be conducted according to the in-use testing procedures in 40 CFR Part 1039, Subpart F.

b. *NTE Standards*. Exhaust emissions from these engines must not exceed the not-to-exceed (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard (STD) in Specific Conditions C**.5.** - C**.7.**, determined from the following equation:

NTE Requirement For Each Pollutant = (1.25) x (STD) (Eq. 1)

[40 CFR 60.4212(a) & (c)]

C.11. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix D., Common Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

MONITORING REQUIREMENTS

C.12. Hour Meter. The owner or operator must install a non-resettable hour meter if one is not already installed. [40 CFR 60.4209(a)]

NOTIFICATION REQUIREMENTS

C.13. 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.]

C.14. Notification of Operation Commencement - The permittee shall notify the Compliance Authority in writing of the date of commencing operation of the EU No. 004 after completing the modifications authorized by this permit, no later than fifteen (15) days after that date. Commencing operation means setting into operation of any emissions unit for any purpose.
[Rules 62-4.070, and 62-210.200, F.A.C., (definition of Commence Operation)]

RECORDKEEPING AND REPORTING REQUIREMENTS

C.15. Hours of Operation Records. The owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner or operator must record the time of operation of the engine and the reason the engine was in operation during that time.
[40 CFR 60.4214]

C.16. Maintenance Records. To demonstrate conformance with the manufacturer's written instructions for maintaining the certified engine and to document when compliance testing must be performed pursuant to Specific Condition **C.9.**, the owner or operator must keep the following records:

a. Engine manufacturer data indicating compliance with the standards.
b. A copy of the manufacturer's written instructions for operation and maintenance of the certified engine.
c. A written maintenance log detailing the date and type of maintenance performed on the engine, as well as any deviations from the manufacturer's written instructions.

[Rule 62-213.440(1), F.A.C.]

C.17. Testing Notification. At such time that the requirements of Specific Condition **C.9.** become applicable, the owner or operator shall notify the compliance authority of the date by which the initial compliance test must be performed.
[Rule 62-213.440(1), F.A.C.]

C.18. 40 CFR 60 Subpart A, General Provisions. The owner or operator shall comply with the applicable requirements of 40 CFR 60 Subpart A, General Provisions, as specified below.

General Provisions Citation	Subject of Citation
§ 60.1	General applicability of the General Provisions
§ 60.2	Definitions (see also § 60.4219)
§ 60.3	Units and abbreviations
§ 60.4	Address
§ 60.5	Determination of construction or modification
§ 60.6	Review of plans
§ 60.9	Availability of information
§ 60.10	State Authority
§ 60.12	Circumvention
§ 60.14	Modification
§ 60.15	Reconstruction
§ 60.16	Priority list
§ 60.17	Incorporations by reference
§ 60.19	General notification and reporting requirements

[40 CFR 60.4218]