



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

FINAL PERMIT

PERMITTEE

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

Air Permit No. 1050375-010-AO
Permit Expires: **07/02/2018**
Minor Air Operation Permit
Operation Permit Renewal

Authorized Representative:
Mr. John McClellan, Plant Manager

This is the permit to renew Air Operation Permit No. 1050375-009-AO for a fiberglass insulation manufacturing 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, 403.6 km East, and 3104.74 km North.

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.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of final permit. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of final permit, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

All petitions filed under these rules shall contain:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the

agency determination;

- (c) A statement of when and how the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action;
- (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301 of the Florida Administrative Code.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

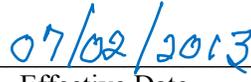
Mediation is not available in this proceeding.

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, 3900 Commonwealth Boulevard, Mail Station #35, 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 thirty days after this order is filed with the clerk of the Department.

Executed in Hillsborough County, Florida



Kelley M. Boatwright
District Air Program Administrator
Southwest District



Effective Date

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including 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.

John McClellan, Plant Manager, Owens Corning, john.mcclellan@owenscorning.com

Garrett Mickley, EH&S Leader, Owens Corning, garrett.mickley@owenscorning.com

Katherine Katsourides, Senior Consultant, Trinity Consultants, kkatsourides@trinityconsultants.com

Erin DiBacco, Environmental Manager, DEP-SWD, 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)

07/02/2013
(Date)

SECTION 1. GENERAL INFORMATION (FINAL)

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 (4)
002	Cold Top Electric Glass Furnaces (2)
003	Fiberglass Insulation Forming Process

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

Exempt Emission Units/Activities

Raw Material Handling Area

Mixed glass batch material from the scale (weighing) and mixing operation is emptied into a batch transporter vessel which is pressurized with compressed air after it is loaded. This batch is transferred from the transporter to a working bin above the glass furnaces via the slow depressurization of the transporter tank. This dense phase pneumatic transfer operation involves a 45 second long transfer stage, a 5 second long purge stage, and a 5 second long depressurization stage. The batch transporter vessel is equipped with a small baghouse dust collector. Potential particulate matter (PM) emissions from this transfer operation are estimated at 0.01 TPY (before control Potential to Emit (PTE) is less than 1 TPY). (Exempt from permitting in accordance with the provisions of Rule 62-210.300(3)(b)(1), F.A.C. (Generic Emissions Unit or Activity Exemption).)

Other Exempt Emission Sources/Activities:

150 kW diesel-fired emergency generator, 201 horsepower Onan Komatsu, Model Number: 0671TA (Exempt in accordance with the provisions of Rule 62-210.300(3)(a)35., F.A.C. (Categorical and Conditional Exemptions - Stationary Reciprocating Internal Combustion Engines.)

*(*Federal NESHAP Applicability Note - Based on its date of manufacture, the diesel engine for the above emergency generator is subject to the current federal requirements of 40 CFR 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE) as an existing emergency combustion ignition stationary RICE at area source of hazardous air pollutants (HAPs).)*

SECTION 1. GENERAL INFORMATION (FINAL)

The following emission sources/activities are exempt from permitting in accordance with the provisions of Rule 62-4.040(1)(b), F.A.C. (insignificant emissions). Exemptions under Rule 62-4.040(1)(b), F.A.C., may be revoked if the installation is substantially modified or the basis for the exemption is determined to be materially incorrect.

- 8,500 gallon mineral oil storage tank
- electric forehearths
- cullet (scrap solid glass) piles
- cooling towers

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 the pollutant particulate matter less than 10 microns (PM_{10}). The emission limitations and restrictions on the type and amount of glass used in this permit will ensure that the facility's PM_{10} emissions will be below the threshold for a Title V source.
- This facility is subject to federal New Source Performance Standards (NSPS) 40 CFR 60 Subpart PPP – Wool Fiberglass Insulation Manufacturing Plants. Subpart PPP applies to Emissions Unit (EU) No. 003 (Fiberglass Insulation Forming Process) only.

PERMIT HISTORY/AFFECTED PERMITS

This permit replaces Operation Permit No. 1050375-009-AO.

**SECTION 2. ADMINISTRATIVE REQUIREMENTS AND FACILITY-WIDE SPECIFIC
CONDITIONS (FINAL)**

ADMINISTRATIVE REQUIREMENTS

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

Florida Department of Environmental Protection
Southwest District Office
Air Permitting Program
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-632-7600

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: 813-632-7600

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;
- d. Appendix D. Common Testing Requirements;
- e. Appendix E. Appendix NSPS 40 CFR 60 Subpart PPP (Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants)
- f. Appendix F. Appendix NSPS 40 CFR 60 Subpart A (General Provisions for 40 CFR 60 New Source Performance Standards)

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

SECTION 2. ADMINISTRATIVE REQUIREMENTS AND FACILITY-WIDE SPECIFIC CONDITIONS (FINAL)

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 this 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.8.** and **B.15.**, if not previously submitted; and
 - d. copies of the most recent month of records/logs specified in Specific Condition Nos. **B.12.**, **B.13.** and **B.16.**

[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 SPECIFIC CONDITIONS

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

9. 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); Construction Permit No.1050375-008-AC]

**SECTION 2. ADMINISTRATIVE REQUIREMENTS AND FACILITY-WIDE SPECIFIC
CONDITIONS (FINAL)**

EMISSIONS STANDARDS

- 10. 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.; Construction Permit No. 1050375-008-AC]

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

- 11. 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.; Construction Permit No. 1050375-008-AC]

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

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

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, 7, 10 and 11	Model 16AVS6 AirLanco Bin Vent fabric filter baghouse
		Scale Hopper/Mixer /Furnace Dust Bin Baghouse	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
002	Cold Top Electric Glass Furnaces	Furnace No. 1 and Furnace No. 2 Baghouses	to control emissions from furnaces	Separate high temperature Flex-Kleen Model 22/36 PSTL-196(IIIG) 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 eight (8) storage silos/bins (Bin Nos. 1, 2A, 2B, 3, 4, 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/PM₁₀) 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

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

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

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. This 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, and/or as a filter receiver /baghouse dust collector for the furnace raw material running bins (EU No. 002). This baghouse is designated as the Weigh Hopper/Mixer/Furnace Dust Bin Baghouse.

Melting in Cold Top Electric Furnaces (2) (EU No. 002)

After weighing and mixing, the raw materials are conveyed pneumatically to two (2) running bins. From the running bins the material is mechanically charged via augers and chutes into the two (2) 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/PM₁₀) emissions from raw material transfer to and operation of each melting furnace are controlled by Flex-Kleen Model 22/36 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. These two furnace baghouses also serve as filter receivers for the furnace running bins. The furnace baghouses both exhaust through one common exhaust stack.

Dust collected in the furnace baghouses is transferred to the furnace dust 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 and /or for the furnace running bins.

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 (Furnace No. 1 Baghouse and Furnace No. 2 Baghouse) 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.; Construction Permit No. 1050375-008.AC]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

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

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.
[Construction Permit No. 1050375-008-AC]

COMPLIANCE TESTING REQUIREMENTS

- A.3.** 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.; Construction Permit No. 1050375-008-AC]
- A.4.** 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.5.** 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]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

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

A.6. 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, 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 (2)	Furnace No. 1 and Furnace No. 2 Baghouses	operation of furnace being controlled by the baghouse

[Rule 62-297.310(4)(a)2., F.A.C.; Construction Permit No. 1050375-008-AC]

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

NOTIFICATION REQUIREMENTS

- A.7.** 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:
- the date, time, and location of each test;
 - the emission unit, specific emission point, pollutant to be tested and method to be used;
 - 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.

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

REPORTING REQUIREMENTS

- A.8.** 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.; Construction Permit No. 1050375-008-AC]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

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. There will be a total of seven (7) fiberizers, each with a production capacity of 1,250 pounds of glass fibers per hour.

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. 2) 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.)

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

B. EU No. 003 Fiberglass Insulation Forming Process

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 38,550 tons of glass pulled in any consecutive 12-month period.

[Rule 62-210.200, F.A.C. (Potential to Emit); Construction Permit No.1050375-008-AC]

(Permitting Note - The above production limitation, in conjunction with the lb/ton of glass pulled particulate matter (PM) emission limitation (Specific Condition B.4.a.), and control equipment requirements contained in this permit, results in potential emission from this facility less than the PSD/Title V major source levels as defined in Rule 62-210.200, F.A.C.)

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

B. EU No. 003 Fiberglass Insulation Forming Process

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); Construction Permit No. 1050375-003-AC]

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); Construction Permit No. 1050375-008-AC]

(* Permitting Note - The above emission limitation, in conjunction with the production limitation (Specific Condition B.2.) and control equipment requirements contained in this permit, limit the potential after-control emissions of PM from the forming process to 86.7 tons/year.)

- 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.

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

B. EU No. 003 Fiberglass Insulation Forming Process

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. 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.; Construction Permit No. 1030375-008-AC]

B.7. Compliance Test Requirements - 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.]

B.8. 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 ± 14 ° C (350 ± 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]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

B. EU No. 003 Fiberglass Insulation Forming Process

B.9. Operation During Forming Process Scrubbers Common Stack Compliance Testing – 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 8,750 pounds glass per hour. The tested fiberizers production (pull) rate shall be the average pounds per hour production rate over the actual test period.

Compliance tests submitted for rates less than 90% of either of the maximum permitted production rates listed above shall automatically amend the permit to reflect the tested rate(s) plus 10% as the currently permitted production rate*. Once the unit is so limited, operation at a higher production rate is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the authority to operate at a higher rate.

(* Clarification - When a unit is limited to an operating rate of 110% of the test rate, the permittee may provide a 15-day notice of its intent to conduct an additional test (as per Specific Condition B.11).

The notice may specify a 15-day period during which the unit will be allowed to operate at a higher rate for the purposes of testing. For example, the first five days of the 15-day period may be used to bring the unit up to a higher production level; the next five days may be used for the testing itself.)

The test results shall be submitted to the Compliance Authority within 45 days of testing. Upon submittal of the most recent results to the Compliance Authority, the unit may then operate at 110% of the most recent successfully (i.e., in compliance with the permit limitations) tested rate, not to exceed the maximum permitted rate. The actual production rates during the test shall be included in each test report.

Failure to include the actual process or production rates with the test report, or operating at conditions which do not reflect the normal operating conditions, may invalidate the test. In addition, the test report shall include the values of any scrubber control device operating parameters as specified elsewhere in this permit to be included with the test reports. (See Specific Condition B.15. below for test report information requirements.)

[Rules 62-4.070(3), 62-204.800(8)(b), 62-297.310(2), F.A.C.; NSPS Subpart PPP 40 CFR 60.685(b); Construction Permit No. 1050175-008-AC]

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)]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

B. EU No. 003 Fiberglass Insulation Forming Process

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:
- the date, time, and location of each test;
 - the emission unit, specific emission point, pollutant to be tested and method to be used;
 - 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.

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

RECORDKEEPING AND REPORTING REQUIREMENTS

- B.12. 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:

- during compliance testing - at 30-minute intervals during each 2-hour test run of each performance test of a wet scrubber control device;
- 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.13. Forming Process Production Records** - In order to document compliance with the production/operating rate limitations of Specific Conditions B.2. and B.9., the permittee shall maintain records of the following:

Daily (if required*)

- date of record;
- 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 8,750 pounds glass/hour, which would establish a daily operating rate limitation of 110% of the tested rate (*see Specific Condition B.9.*)

Monthly

- calendar month of record;
- 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.14. 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.

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

B. EU No. 003 Fiberglass Insulation Forming Process

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

B.15. 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.12.):

- 1). scrubber pressure drop (inches H₂O) 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 H₂O) 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; Construction Permit No. 1050375-003-AC]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

B. EU No. 003 Fiberglass Insulation Forming Process

B.16. 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)]