



Joseph E. Kernan  
Governor

Lori F. Kaplan  
Commissioner

August 17, 2004

100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
(317) 232-8603  
(800) 451-6027  
www.in.gov/idem

TO: Interested Parties / Applicant

RE: Owens Corning Fabricating / 039-18680-00002

FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures  
FNPER.dot 9/16/03



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August 17, 2004

Mr. Craig Ray  
Owens Corning Fabricating Solutions  
16710 Maple City Drive  
Goshen, Indiana 46526

Re: 039-18680-00002  
Significant Source Modification to:  
Part 70 permit No.: T039-6091-00002

Dear Mr. Ray:

Owens Corning Fabricating Solutions was issued a Part 70 operating permit T039-6091-00002 on December 27, 2000 for a fiberglass panel manufacturing plant. An application to modify the source was received on March 16, 2004. Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for modification at the source:

- (a) One (1) fiberglass panel manufacturing line, identified as the "A" line and Unit 001, equipped with one (1) optimized spray or equivalent gel coat application system, one (1) non-atomized or equivalent resin application system with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system, exhausting through eleven (11) stacks, identified as SV-25 through SV-35. (Constructed in 1987 and modified in 2004)
- (b) One (1) fiberglass panel manufacturing line, identified as the "B" line and Unit 001, equipped with one (1) optimized spray or equivalent gel coat application system, one (1) non-atomized or equivalent resin application system with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system, exhausting through twelve (12) stacks, identified as SV-36 through SV-47. (Constructed in 1998 and modified in 2004)

The following construction conditions are applicable to the proposed project:

- 1. General Construction Conditions  
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
- 2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
- 3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
- 4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
- 5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

This significant source modification authorizes modification of the existing units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,  
Original signed by

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments

ERG/YC

cc: File - Elkhart County  
Elkhart County Health Department  
Northern Regional Office  
Air Compliance Section Inspector - Greg Wingstrom  
Compliance Data Section  
Administrative and Development - Sara Cloe  
Technical Support and Modeling - Michele Boner



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## PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Owens Corning Fabricating Solutions  
(formerly Fabwel Composites, Inc.)  
16710 Maple Drive  
Goshen, Indiana 46526**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T039-6091-00002	
Issued by: Janet McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: December 27, 2000  Expiration Date: December 27, 2005

First Significant Permit Modification No.: 039-17700-00002, issued November 20, 2003

Second Significant Source Modification No.: 039-18680-00002	
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: August 17, 2004



## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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The Permittee owns and operates a fiberglass panel manufacturing operation.

Responsible Official:	Plant Manager
Source Address:	16710 Maple Drive, Goshen, Indiana 46526
Mailing Address:	16710 Maple Drive, Goshen, Indiana 46526
Phone Number:	(574) 534-3447
SIC Code:	3089
County Location:	Elkhart
Source Location Status:	Nonattainment for ozone under 8-hour standard Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Major Source under Nonattainment NSR; Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) fiberglass panel manufacturing line, identified as the "A" line and Unit 001, consisting of one (1) optimized spray or equivalent gel coat application system, one (1) non-atomized or equivalent resin application system with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system, with dry filters for overspray control, and exhausting at eleven (11) stacks, identified as SV-25 through SV-35. (Constructed in 1987, and modified in 2004)
- (b) One (1) fiberglass panel manufacturing line, identified as the "B" line and Unit 001, consisting of one (1) optimized spray or equivalent gel coat application system, one (1) non-atomized or equivalent resin application system with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system, with dry filters for overspray control, and exhausting to ten (10) stacks designated as SV-36 through SV-45. (Constructed in 1998 and modified in 2004)
- (c) One (1) fiberglass panel manufacturing line, identified as the "C" line and Unit 003, consisting of two (2) optimized spray or equivalent gel coat application systems, one (1) non-atomized or equivalent resin application system with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system, exhausting through five (5) stacks designated as CEX1-CEX5, with dry filters for overspray. (Constructed in 2000 and modified in 2003)
- (d) One (1) Lauan woodworking station for lines A, B, and C, identified as Unit 002, with a maximum raw material input rate of 5,063 pounds per hour, consisting of one (1) wide belt sander, one (1) table saw, one (1) chop saw, and one (1) panel saw, all controlled by one (1) Honeyville baghouse, exhausting to stack S002. (Constructed in 1988)

- (e) One (1) standby woodworking shop equipment for lines A, B, and C, identified as Unit 004, with a maximum throughput rate of 5,063 pounds of raw material per hour, consisting of one (1) wide belt sander, controlled by one (1) Torit cyclone/dust collector exhausting to stack S004. (Constructed in 1998 and 2000)
- (f) One (1) panel grinding/trimming station for lines A and B, identified as Unit 005, with a maximum raw material input rate of 11,050 lb/hr, consisting of the following (constructed in 1988 and modified in 1998 and 2004):
  - (1) One (1) trimming operation, including one (1) CNC panel saw, two (2) hand saws, and one (1) vertical saw, controlled by one (1) baghouse (CDC1), exhausting to stack S005.
  - (2) One (1) grinding operation, including four (4) hand grinders, each controlled by a high efficiency dust collector and/or baghouse CDC1.
- (g) One (1) panel CNC saw for line C, identified as Unit 006, with a maximum throughput rate of 5,525 pounds of raw material per hour, controlled by one (1) UAS dust collector (Dust Hog) and one (1) UAS interior baghouse, exhausting to stack S006. (Constructed in 2000)
- (h) Two (2) panel grinding machines for line C, identified as Unit 007, each with a maximum raw material input rate of 5,525 pounds per hour, controlled by one (1) UAS interior baghouse and one (1) UAS dust collector (Dust Hog), exhausting to stack S006. This unit may also controlled by additional high efficiency dust collectors or portable drum dust collectors. (Constructed in 2000)
- (i) One (1) vertical saw for Line C, identified as 008, with a maximum throughput rate of 5,525 pounds of raw materials per hour, controlled by one (1) UAS dust collector (Dust Hog) and one (1) UAS interior baghouse, and exhausting to stack S006. (Constructed in 2002)

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
- (b) Solvent recycling systems with batch capacity less than or equal to 100 gallons
- (c) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone.
- (d) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower .
- (e) Other activities or categories not previously identified:

Insignificant Thresholds:

Lead (Pb) = 0.6 ton/year or 3.29 lbs/day	Carbon Monoxide (CO) = 25 lbs/day
Sulfur Dioxides (SO <sub>2</sub> ) = 5 lbs/hour or 25 lbs/day	Particulate Matter (PM) = 5 lbs/hour or 25 lbs/day
Nitrogen Oxides (NO <sub>x</sub> ) = 5 lbs/hour or 25 lbs/day	Volatile Organic compounds (VOC) = 3 lbs/hr or 15 lbs/day

- (1) One (1) arc welder, using type E6013 electrode, with a maximum electrode consumption rate of 0.094 pounds per hour.

- (2) Two (2) styrene monomer storage tanks. each with an annual throughput of 85537 gallons per year, identified as 009a and 009b.
- (3) Two (2) styrene resin storage tanks, each with a capacity of 6,000 gallons.
- (4) Four (4) natural gas air make-up units, designated as AM012-AM015, with a maximum heat input capacity of 0.044 million British thermal units per hour (MMBtu/hr) each.
- (5) One ( 1 ) natural gas air make-up unit, designated as AM016 , with a maximum heat input capacity of 0.012 MMBtu/hr each.
- (6) Eight (8) infrared tube heaters each rated a 0.120 MMBtu/hr, identified as 017-024 and three (3) infrared tube heaters each rated at 0.075 MMBtu/hr, identified as 025-027.
- (7) One (1) office furnace rated at 0.125 MMBtu/hr identified as 028.
- (8) One (1) air make-up unit rated at 0.880 MMBtu/hr identified as AM029, three (3) air make-up units each rated at 3.745 MMBtu/hr identified as AM030-032, and one (1) air make-up unit rated at 3.075 MMBtu/hr identified as AM033.
- (9) Fourteen (14) Radiant Tube type heaters rated at 0.1 million (MM) btu/hr each, two (2) Unit Heaters rated at 0.69 million MMBtu/hr each, six (6) air make-up units rated at 3.008 MMBtu/hr each.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 -Applicability).

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

- (a) One (1) fiberglass panel manufacturing line, identified as the "A" line and Unit 001, consisting of one (1) optimized spray or equivalent gel coat application system, one (1) non-atomized or equivalent resin application system with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system, with dry filters for overspray control, and exhausting at eleven (11) stacks, identified as SV-25 through SV-35. (Constructed in 1987, and modified in 2004)
- (b) One (1) fiberglass panel manufacturing line, identified as the "B" line and Unit 001, consisting of one (1) optimized spray or equivalent gel coat application system, one (1) non-atomized or equivalent resin application system with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system, with dry filters for overspray control, and exhausting to ten (10) stacks designated as SV-36 through SV-45. (Constructed in 1998 and modified in 2004)
- (c) One (1) fiberglass panel manufacturing line, identified as the "C" line and Unit 003, consisting of two (2) optimized spray or equivalent gel coat application systems, one (1) non-atomized or equivalent resin application system with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system, exhausting through five (5) stacks designated as CEX1-CEX5, with dry filters for overspray. (Constructed in 2000 and modified in 2003)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 General Reduction Requirements for New Facilities [326 IAC 8-1-6]

- (a) Pursuant to CP No. 039-4937-00002, the BACT for the fiberglass panel manufacturing line, identified as line "A", is use of an air assisted airless application system for the gel coat line, and use of an airless application or equivalent system for the resin/chop line, with no add-on control devices.
- (b) Pursuant to CP No.039-9288-00002, issued on August 6, 1998, the fiberglass panel manufacturing line, identified as line "B", is subject to the requirements of 326 IAC 8-1-6, which requires that the Best Available Control Technology (BACT) be used to control VOC emissions. BACT for this fiberglass panel manufacturing line, identified as line "B" shall be satisfied by the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control).
- (c) Pursuant to SSM No. 039-12284-00002, issued on October 13, 2000, the fiberglass panel manufacturing line, identified as line "C", is subject to the requirements of 326 IAC 8-1-6, which requires that the Best Available Control Technology (BACT) be used to control VOC emissions. BACT for this fiberglass panel manufacturing line, identified as line "C" shall be satisfied by the MACT determination of 326 IAC 2-4.1-1 (New Source Toxics Control).

#### D.1.2 New Source Toxics Control [326 IAC 2-4.1-1] [326 IAC 8-1-6] [326 IAC 2-2] [326 IAC 2-1.1-5]

Pursuant to the 326 IAC 4.1-1 (MACT) and 326 IAC 8-1-6 (BACT), the Permittee shall comply with the following requirements for the fiberglass panel manufacturing lines A, B, and C:

- (a) Pursuant to CP #039-9228-00002, issued on August 6, 1998, use of resins and gel coats in lines A and B shall be limited such that the potential to emit (PTE) volatile organic HAP from use of such resins and gel coats only shall be less than 249 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This also makes the requirements of 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the modification in 2004.

- (b) Pursuant to SSM #039-17785-00002, issued on November 5, 2003, use of resins and gel coats in line C shall be limited such that the potential to emit (PTE) volatile organic HAP from use of such resins and gel coats only shall be less than 129.6 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit ensures the net VOC increase is less than 40 tons/yr for the modification in 2003 and makes the requirements of 326 IAC 2-2 (PSD) not applicable.
- (c) Compliance with the emission limits in (a) and (b) of this condition shall be determined based upon the following criteria:
- (1) Monthly usage by weight, content of monomer that is HAP, method of application, and other emission reduction techniques used for each gel coat and resin shall be recorded. Volatile organic HAP emissions shall be calculated by multiplying the usage of each gel coat and resin by the emission factor that is appropriate for the HAP monomer content, method of application, and other emission reduction techniques used for each gel coat and resin, and summing the emissions for all gel coats and resins. Emission factors shall be obtained from the reference approved by IDEM, OAQ.
- (2) The emission factors approved for use by IDEM, OAQ for open molding processes shall be taken from the following reference: "Unified Emission Factors for Open Molding of Composites," Composites Fabricators Association, July 23, 2001. The emission factor for the VIP application system (closed molding) is 1% by weight of the HAP monomer content, which is provided by the American Composites Manufacturers Association (ACMA). For the purposes of these emission calculations, HAP monomer in resins and gel coats that is not styrene or methyl methacrylate shall be considered as styrene on an equivalent weight basis.
- (d) The HAP monomer content of resins and gel coats used shall be limited to the following or their equivalent on an emissions mass basis:

Type of Gel Coat or Resin	HAP Monomer Content, % by weight
Open Molding Production 1 Gel Coat	36
Open Molding Production Resin	35
VIP Production Resin	40

<sup>1</sup>Production refers to the manufacture of parts.

HAP monomer contents shall be calculated on a neat basis, which means excluding any filler. Compliance with these HAP monomer content limits shall be demonstrated on a monthly basis.

- (e) Non-atomized spray or equivalent application technology shall be used to apply unfilled production resins. Non-atomized spray application technology includes flow coaters, flow choppers, pressure-fed rollers, or other non-spray applications of a design and specifications approved by IDEM, OAQ.

If it is not possible to apply a portion of unfilled resins with non-atomized spray application technology, equivalent emissions reductions must be obtained via use of other emission reduction techniques. Examples of other emission reduction techniques include, but are not limited to, lower HAP monomer content resins and gel coats, closed molding, vapor suppression, vacuum bagging/bonding, or installing a control device.

- (f) Optimized spray techniques according to a manner approved by IDEM, OAQ shall be used for gel coats and filled resins (where fillers are required for corrosion or fire retardant purposes) at all times. Optimized spray techniques include, but are not limited to, the use of airless, air-assisted airless, high volume low pressure (HVLP), or other spray applicators demonstrated to the satisfaction of IDEM, OAQ, to be equivalent to the spray applicators listed above.

HVLP spray is the technology used to apply material to substrate by means of application equipment that operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

- (g) The listed work practices shall be followed for the fiberglass panel manufacturing lines "A", "B", and "C":
- (1) To the extent possible, a non-VOC, non-HAP solvent shall be used for cleanup.
  - (2) For VOC- and/or HAP-containing materials:
    - (A) Cleanup solvent containers shall be used to transport solvent from drums to work.
    - (B) Cleanup stations shall be closed containers having soft-gasketed, spring-loaded closures and shall be kept completely closed when not in use.
    - (C) Cleanup rags saturated with solvent shall be stored, transported, and disposed of in containers that are closed tightly.
    - (D) The spray guns used shall be the type that can be cleaned without the need for spraying the solvent into the air.
    - (E) All solvent sprayed during cleanup or resin changes shall be directed into containers. Such containers shall be closed as soon as solvent spraying is complete and the waste solvent shall be disposed of in such a manner that evaporation is minimized.
  - (3) All material storage containers shall be kept covered when not in use.

D.1.3 Work Practice Standards for Reinforced Plastic Composites Fabrication [326 IAC 20-25-4]

Pursuant to 326 IAC 20-25-4, the following work practice standards shall be implemented:

- (a) Non-atomizing spray equipment shall not be operated at pressures that atomize the material during the application process.
- (b) Except for mixing containers as described in item (g), HAP containing materials shall be kept in a closed container when not in use.
- (c) Solvents sprayed during cleanup and resin changes shall be directed into solvent collection containers.
- (d) Solvent collection containers shall be kept closed when not in use.
- (e) Clean-up rags with solvent shall be stored in closed containers.
- (f) Closed containers shall be used for the storage of the following:

- (1) All production and tooling resins that contain HAPs.
  - (2) All production and tooling gel coats that contain HAPs.
  - (3) Waste resins and gel coats that contain HAPs.
  - (4) Cleaning materials, including waste cleaning materials.
  - (5) Other materials that contain HAPs.
- (g) All resin and gel coat mixing containers with a capacity equal to or greater than fifty-five (55) gallons must have a cover with no visible gaps in place at all times except when material is being added to or removed from a container, or when mixing or pumping equipment is being placed in or removed from a container.

D.1.4 Operator Training for Reinforced Plastic Composites Fabrication [326 IAC 20-25-8]

Pursuant to 326 IAC 20-25-8, all new and existing personnel, including contract personnel, who are involved in resin and gel coat spraying and spray-like applications (for example, those applications that could result in excess emissions if performed improperly) shall be trained according to the following schedule:

- (a) All personnel hired after March 7, 2001 shall be trained within fifteen (15) days of hiring.
- (b) All personnel hired before March 7, 2001 shall be trained or evaluated by a supervisor within thirty (30) days of the start of operation.
- (c) To ensure training goals listed in subsection (b) are maintained, all personnel shall be given refresher training annually.
- (d) Personnel who have been trained by another owner or operator subject to 326 IAC 20-25 are exempt from subdivision (a) if written documentation that the employee's training is current is provided to the new employer.
- (e) If the result of an evaluation shows that training is needed, such training shall occur within fifteen (15) days of the evaluation.
- (f) The lesson plans shall cover, for the initial and refresher training, at a minimum, all of the following topics:
  - (1) Appropriate application techniques.
  - (2) Appropriate equipment cleaning procedures.
  - (3) Appropriate equipment setup and adjustment to minimize material usage and overspray.
- (g) The owner or operator shall maintain the following training records on site and available for inspection and review:
  - (1) A copy of the current training program.
  - (2) A list of all current personnel, by name, that are required to be trained and the dates they were trained and the date of the most recent refresher training. Records of prior training programs and former personnel are not required to be maintained.

D.1.5 Particulate Matter (PM) [40 CFR 52, Subpart P]

Pursuant to 40 CFR 52, Subpart P, the particulate matter (PM) from each of the fiberglass panel manufacturing lines A, B, and C shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

D.1.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B -Preventive Maintenance Plan; of this permit, is required for line "A" line, "B", and line "C" and any control devices.

**Compliance Determination Requirements**

D.1.7 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-4(a)] [326 IAC 8-1-2(a)]

Compliance with the volatile organic HAP content and usage limitations contained in Condition D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.8 Emissions Standards for Reinforced Plastics Composites Fabricating [326 IAC 20-25-3]

Compliance with the limitations contained in Condition D.1.2 may be demonstrated using monthly emission averaging within each resin or gel coat application category by the use of resins or gel coats with HAP monomer contents lower than the limits specified, and/or additional emission reduction techniques approved by IDEM, OAQ.

Examples of emission reduction techniques include, but are not limited to, using non-atomized application to apply resins or gel coats within a category that does not require non-atomized application, lower monomer content resins and gel coats, vapor suppression, vacuum bagging, controlled spraying, or installing a control device. This is allowed to meet the HAP monomer content limits for resins and gel coats within each category, and shall be calculated on an equivalent emissions mass basis monthly to demonstrate compliance as shown below:

For Averaging within a category:

$$Em_A \leq M_R * E_a$$

Where:

$M_R$  = Total monthly mass of material within each category  
 $E_a$  = Emission factor for each material based on allowable monomer content **and allowable application method** for each category.  
 $Em_A$  = Actual monthly emissions from all materials used within a category based on material specific emission factors, emission reduction techniques and emission controls  
*Units: mass = tons*  
*emission factor = lbs of monomer per ton of resin or gel coat*  
*emissions = lbs of monomer*

Note: Fillers may not be included when averaging.

D.1.9 Particulate Matter (PM)

(a) Pursuant to CP No.039-4937 -00002, issued on March 21, 1996, the dry filter control shall be in operation at all times when the fiberglass panel manufacturing line, identified as the "A" line, is in operation.

- (b) Pursuant to CP No.039-9288-00002, issued on August 6, 1998, the dry filters for PM control shall be in operation at all times when the fiberglass panel manufacturing line identified as the "B" line.
- (c) Pursuant to CP No.039-12284-00002, issued on October 13, 2000, the dry filters for PM control shall be in operation at all times when the fiberglass panel manufacturing line, identified as the "C" line.

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.1.10 Monitoring**

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters, when the lines are in operation. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the stacks 25 through 45, and stacks CEX1 through CEX5 while one or more of the spray applicators are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a deviation from this permit.
- (b) Monthly inspections shall be performed of the particulate emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a deviation from this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **D.1.11 Record Keeping Requirements**

- (a) To document compliance with Condition D.1.2, the Permitted shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits and the VOC and monomer content limits established in Condition D.1.2.
  - (1) The amount of each resin and gel coat used. The VOC and mass weighted monomer content of each resin and gel coat used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The volume weighted volatile organic HAP content of the coatings used for each month;
  - (4) The cleanup solvent usage for each month;
  - (5) The total volatile organic HAP usage for each month;
  - (6) The weight of volatile organic HAP emitted for each compliance period;

- (7) Method of application and other emission reduction techniques for each resin and gel coat used for each month.
- (b) To document compliance with Condition D.1.10, the Permitted shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (c) To document compliance with Condition D.1.4, the Permittee shall maintain the following training records:
  - (1) A copy of the current training program.
  - (2) A list of all current personnel, by name, that are required to be trained and the dates they were trained and the date of the most recent refresher training. Records of prior training programs and former personnel are not required to be maintained.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.12 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.2(a) and (b) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.2

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- (d) One (1) Lauan woodworking station for lines A, B, and C, identified as Unit 002, with a maximum raw material input rate of 5,063 pounds per hour, consisting of one (1) wide belt sander, one (1) table saw, one (1) chop saw, and one (1) panel saw, all controlled by one (1) Honeyville baghouse, exhausting to stack S002. (Constructed in 1988)
- (e) One (1) standby woodworking shop equipment for lines A, B, and C, identified as Unit 004, with a maximum throughput rate of 5,063 pounds of raw material per hour, consisting of one (1) wide belt sander, controlled by one (1) Torit cyclone/dust collector exhausting to stack S004. (Constructed in 1998 and 2000)
- (f) One (1) panel grinding/trimming station for lines A and B, identified as Unit 005, with a maximum raw material input rate of 11,050 lb/hr, consisting of the following (constructed in 1988 and modified in 1998 and 2004):
  - (1) One (1) trimming operation, including one (1) CNC panel saw, two (2) hand saws, and one (1) vertical saw, controlled by one (1) baghouse (CDC1), exhausting to stack S005.
  - (2) One (1) grinding operation, including four (4) hand grinders, each controlled by a high efficiency dust collector and/or baghouse CDC1.
- (g) One (1) panel CNC saw for line C, identified as Unit 006, with a maximum throughput rate of 5,525 pounds of raw material per hour, controlled by one (1) UAS dust collector (Dust Hog) and one (1) UAS interior baghouse, exhausting to stack S006. (Constructed in 2000)
- (h) Two (2) panel grinding machines for line C, identified as Unit 007, each with a maximum raw material input rate of 5,525 pounds per hour, controlled by one (1) UAS interior baghouse and one (1) UAS dust collector (Dust Hog), exhausting to stack S006. This unit may also be controlled by additional high efficiency dust collectors or portable drum dust collectors. (Constructed in 2000)
- (i) One (1) vertical saw for Line C, identified as 008, with a maximum throughput rate of 5,525 pounds of raw materials per hour, controlled by one (1) UAS dust collector (Dust Hog) and one (1) UAS interior baghouse, and exhausting to stack S006. (Constructed in 2002)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]

Particulate emissions from the operations 002, 004, 005, 006, 007 and 008 shall be limited to the emission limits listed in the table below:

Unit ID	Max. Throughput Rate (lbs/hr)	Particulate Emission Limit (lbs/hr)
002	5,063	7.64
004	5,063	7.64
005	11,050	12.9
006	5,525	8.10

Unit ID	Max. Throughput Rate (lbs/hr)	Particulate Emission Limit (lbs/hr)
007	5,525	8.10
008	5,525	8.10

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

**D.2.2 PSD Minor Limits [326 IAC 2-2]**

- (a) In order to make the requirements of 326 IAC 2-2 (PSD) not applicable, the PM and PM10 emissions from operations 002, 004, 006, 007, and 008 shall not exceed the emissions limits listed in the table below:

Unit ID	PM10 Emission Limit (lbs/hr)	PM Emission Limit (lbs/hr)
002	0.21	0.42
004	0.92	1.80
006, 007, and 008	1.14	2.24

This is equivalent to 9.94 tons/yr of PM10 emissions and 19.5 tons/yr of PM emissions. Combined with the PM/PM10 emissions from fiberglass panel manufacturing line C (003), the particulate emissions from Significant Source Modification #039-17785-00002; are limited to less than 15 tons/yr for PM10 and less than 25 tons/yr for PM. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

- (b) In order to make the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following:
- (1) The PM/PM10 emissions from the trimming operations after control shall not exceed  $2.84 \times 10^{-4}$  lbs/ft<sup>2</sup>.
  - (2) The PM/PM10 emissions from the grinding operations after control shall not exceed  $3.70 \times 10^{-3}$  lbs/ft<sup>2</sup>.
  - (3) The total fiberglass panel input to Unit 005 shall be limited to less than 17,500,000 square feet per twelve (12) consecutive month period with compliance determined at the end of each month.

This is equivalent to 34.9 tons/yr of PM/PM10 emissions from Unit 005. Combined with the PM/PM10 emission increase from fiberglass panel manufacturing lines A and B, the particulate emission increases from SSM #039-18680-00002 are limited less than 15 tons/yr for PM10 and less than 25 tons/yr for PM.

**D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the operations 002, 004, 005, 006, 007, and 008, and any control devices.

## Compliance Determination Requirements

### D.2.4 Particulate Matter (PM) and PM10

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The dust collectors and baghouses for PM and PM10 control shall be in operation and control emissions from the operations 002, 004, 005, 006, 007 and 008 at all times that these units are in operation.

## Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

### D.2.5 Visible Emissions Notations

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- (a) Daily visible emission notations from the baghouses, dust collectors/cyclone for the woodworking and finishing operations 002, 004, 005, 006, 007, and 008 stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan shall be considered a deviation from this permit.

### D.2.6 Parametric Monitoring

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The Permittee shall record the total static pressure drop across the baghouses and dust collectors used in conjunction with the woodworking and finishing operations 002, 004, 005, 006, 007, and 008, at least once a week when these woodworking and finishing operations are in operation and venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 2.0 and 4.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for anyone reading. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.2.7 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the operations 002, 004, 005, 006, 007, and 008 when venting to the atmosphere. Inspections required by this condition shall not be performed in consecutive months. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

#### D.2.8 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### **Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

#### D.2.9 Record Keeping Requirements

- (a) To document compliance with Condition D.2.2(b)(3), the Permittee shall maintain monthly records of the total surface area of the fiberglass panels input to Unit 005.
- (b) To document compliance with Condition D.2.5, the Permittee shall maintain daily visible emission notations of the woodworking stations stack exhaust.
- (c) To document compliance with Condition D.2.6, the Permittee shall maintain the weekly records of the total static pressure drop during normal operation when venting to the atmosphere.
- (d) To document compliance with Condition D.2.7, the Permittee shall maintain records of the results of the inspections required under Condition D.2.7.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.2.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.2(b)(3) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY Compliance Data Section

## Part 70 Quarterly Report

Source Name: Owens Corning Fabricating Solutions  
Source Address: 16710 Maple Drive, Goshen, Indiana 46526  
Mailing Address: 16710 Maple Drive, Goshen, Indiana 46526  
Part 70 Permit No.: 039-6091-00002  
Facility: Unit 005  
Parameter: Total surface area of the fiberglass panels processed  
Limit: Less than 17,500,000 square feet per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management  
Office of Air Quality**

**Addendum to the  
Technical Support Document (TSD) for a  
Part 70 Significant Source Modification and a  
Part 70 Significant Permit Modification**

**Source Background and Description**

Source Name:	Owens Corning Fabricating Solutions
Source Location:	16710 Maple City Drive, Goshen, Indiana 46526
County:	Elkhart
SIC Code:	3089
Operation Permit No.:	T039-6091-00002
Operation Permit Issuance Date:	December 27, 2000
Significant Source Modification No.:	039-18680-00002
Significant Permit Modification No.:	039-18917-00002
Permit Reviewer:	ERG/YC

On July 7, 2004, the Office of Air Quality (OAQ) had a notice published in the Goshen News, Goshen, Indiana stating that Owens Corning Fabricating Solutions had applied for a Part 70 Significant Source Modification and a Part 70 Significant Permit Modification to use a Vacuum Infusion Process (VIP) for the existing fiberglass panel manufacturing lines A and B. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On July 28, 2004, Owens Corning Fabricating Solutions submitted comments on the proposed Significant Source Modification and the Significant Permit Modification. The summary of the comments is as follows (bolded language has been added, the language with a line through it has been deleted):

**Comment 1:**

The source stated that the "exterior baghouse" referred to in the unit description for Unit 007 is the "UAS dust collector (Dust Hog)" referred to in the description for Units 006 and 008. In order to be consistent with the unit description for other units, the source requested to change the name of this control device from "exterior baghouse" to "UAS dust collector (Dust Hog)" in the description for Unit 007.

**Response to Comment 1:**

The unit description for Unit 007 in Conditions A.2 and D.2 has been revised as follows as a result of this comment:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
[326 IAC 2-7-5(15)]

- ...
- (h) Two (2) panel grinding machines for line C, identified as Unit 007, each with a maximum raw material input rate of 5,525 pounds per hour, controlled by one (1) UAS interior baghouse and one (1) ~~exterior baghouse~~ **UAS dust collector (Dust Hog)**, exhausting to stack S006. This unit may also controlled by additional high efficiency dust collectors or portable drum dust collectors. (Constructed in 2000)

SECTION D.2 FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(15)]:**

- ...
- (h) Two (2) panel grinding machines for line C, identified as Unit 007, each with a maximum raw material input rate of 5,525 pounds per hour, controlled by one (1) UAS interior baghouse and one (1) ~~exterior baghouse~~ **UAS dust collector (Dust Hog)**, exhausting to stack S006. This unit may also controlled by additional high efficiency dust collectors or portable drum dust collectors. (Constructed in 2000)
- ...

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Comment 2:**

The source stated that there is a typographical error in the fiberglass panel throughput limit in Condition D.2.2(b)(3) and the Technical Support Document (TSD). The allowable fiberglass panel throughput rate for Unit 005 should be 17,500,000 square feet per year, instead of 1,750,000 square feet per year. The source requested this error be corrected in both the permit and the TSD.

**Response to Comment 2:**

According to the emission calculation in Appendix A of the TSD, the maximum allowable fiberglass panel throughput rate for Unit 005 is 17,500,000 square feet per year, which is equivalent to 34.9 tons/yr of PM/PM10 emissions. Combined with the PM/PM10 emissions from the modified fiberglass panel manufacturing lines, the particulate emission increase from this modification is limited to less than 25 tons/yr for PM and less than 15 tons/yr for PM10. Therefore, Condition D.2.2(b)(3) and the corresponding quarterly report form have been revised as follows:

D.2.2 PSD Minor Limits [326 IAC 2-2]

- ...
- (b) In order to make the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following:
    - (3) The total fiberglass panel input to Unit 005 shall be limited to less than ~~1,750,000~~ **17,500,000** square feet per twelve (12) consecutive month period with compliance determined at the end of each month.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance Data Section**

**Part 70 Quarterly Report**

Source Name:	Owens Corning Fabricating Solutions
Source Address:	16710 Maple Drive, Goshen, Indiana 46526
Mailing Address:	16710 Maple Drive, Goshen, Indiana 46526
Part 70 Permit No.:	039-6091-00002
Facility:	Unit 005
Parameter:	Total surface area of the fiberglass panels processed
Limit:	Less than <del>1,750,000</del> <b>17,750,000</b> square feet per twelve (12) consecutive month period with compliance determined at the end of each month.

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document.

**Comment 3:**

The source stated the text in the last paragraph of item (b) in the History section of the TSD should be corrected to "The installation of control devices does **not** affect the potential to emit from the existing grinding operations" .

**Response to Comment 3:**

IDEM, OAQ agrees that the installation of control devices does not affect the potential to emit of the existing units before control and is not considered a modification to the existing units. However, no changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document.

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a Part 70 Significant Source Modification and a Part 70 Significant Permit Modification

#### Source Background and Description

Source Name:	Owens Corning Fabricating Solutions
Source Location:	16710 Maple City Drive, Goshen, Indiana 46526
County:	Elkhart
SIC Code:	3089
Operation Permit No.:	T039-6091-00002
Operation Permit Issuance Date:	December 27, 2000
Significant Source Modification No.:	039-18680-00002
Significant Permit Modification No.:	039-18917-00002
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed a modification application from Owens Corning Fabricating Solutions relating to the modification of the following emission units and pollution control devices:

- (a) One (1) fiberglass panel manufacturing line, identified as the "A" line and Unit 001, equipped with one (1) optimized spray or equivalent gel coat application system, one (1) non-atomized or equivalent resin application system with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system, exhausting through eleven (11) stacks, identified as SV-25 through SV-35. (Constructed in 1987 and modified in 2004)
- (b) One (1) fiberglass panel manufacturing line, identified as the "B" line and Unit 001, equipped with one (1) optimized spray or equivalent gel coat application system, one (1) non-atomized or equivalent resin application system with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system, exhausting through twelve (12) stacks, identified as SV-36 through SV-47. (Constructed in 1998 and modified in 2004)

#### History

Owens Corning Fabricating Solutions is an existing fiberglass panel manufacturing plant and an existing emission offset major source. Their Title V permit (T039-6091-00002) was issued on December 27, 2000. On March 16, 2004, the Permittee submitted an application to the OAQ requesting the following changes to their existing plant:

- (a) Allowing the source to use the Vacuum Infusion Process (VIP) resin application system for the existing fiberglass panel manufacturing lines A and B (Unit 001) and to install a "moving mold" system to these lines:

The moving mold system would allow the source to maneuver fiberglass panels automatically between processes. This system will operate in a long, continuous booth-type enclosure and will improve worker efficiency and safety.

The use of VIP resin application is a closed molding-type technique which reduces the VOC and HAP emissions from the fiberglass panel manufacturing process. According to the website of the American Composites Manufacturers Association (ACMA), the VOC emission factor for the closed molding process is 1% by weight of the styrene used (20 lbs/ton).

Pursuant to 326 IAC 2-4.1 (MACT) and CP #039-9288-00002, issued on August 6, 1998, the VHAP emissions from the use of resins and gel coats for panel manufacturing lines A and B shall be limited to less than 249 tons per twelve (12) consecutive month period. The source proposed to maintain this VHAP emission limit for lines A and B. Since VHAP emissions from each panel will decrease when using VIP resin application technique, this modification will increase the panel production rate in lines A and B, and result in increased utilization of the existing panel grinding/trimming station for lines A and B (Unit 005).

Note that the fiberglass panels produced by a VIP method do not require lauan wood panels. Due to their high strength, the fiberglass panels produced by the VIP method do not go through the grinding process (only trimming) at Unit 005. Therefore, this modification will not increase utilization of the existing lauan woodworking operations for lines A and B (Units 002 and 004). The source also proposed to limit the maximum HAP content of the resin used for the VIP method to less than 40% by weight.

This source is an existing Emission Offset major source. The VOC increase from this modification is less than 40 tons/yr. The source has elected to comply with a throughput limit for Unit 005 to limit the total PTE increase of this modification to less than 25 tons/yr for PM and 15 tons/yr for PM10. Therefore, the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) are not applicable to this modification.

(b) Adding high efficiency dust collectors:

The source stated that they may add high efficiency dust collectors to the following emission units:

- (1) Four (4) hand grinders for lines A and B (Unit 005), which are currently controlled by baghouse CDC1.
- (2) Two (2) panel grinding machines for line C (Unit 007), which are currently controlled by an existing interior baghouse and an exterior baghouse.

The installation of control devices does affect the potential to emit from the existing grinding operations. Therefore, the installation of dust collectors are not considered modifications to Units 005 and 007.

(c) Revising the maximum throughput rate for each woodworking operation as follows:

The source stated that the throughput rates listed in SPM #039-17700-00002, issued on November 20, 2003, counted only the weight of the lauan boards and did not include the weight of the gel coat or resin contained in the fiberglass panels. Therefore, the source requested the maximum throughput rate for each woodworking operation be revised to the rate listed in the table below:

Unit ID	Max. Throughput Rate (lbs/hr)
002	5,063
004	5,063

Unit ID	Max. Throughput Rate (lbs/hr)
005	11,050
006	5,525
007	5,525
008	5,525

The source has provided the panel production records for each unit in 2002 and 2003. These records show that the actual throughput rates for these units did not change significantly and are greater than the maximum rates listed in SPM #039-17700-00002, issued on November 20, 2003. Therefore, the maximum throughput rates for these units have been corrected in the revised permit.

- (d) Adding one (1) vertical saw with the existing trimming operation of Unit 005. This unit will be controlled by the existing baghouse CDC1.
- (e) Revising the stack number for existing fiber glass panel manufacturing line B. The source stated that the emissions from this line exhaust through stacks SV-36 through SV-45.

#### **Enforcement Issue**

There are no enforcement actions pending.

#### **Recommendation**

The staff recommends to the Commissioner that the Part 70 Significant Source Modification and the Part 70 Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on March 16, 2004. Additional information was received on April 30, 2004, May 11, 2004, and June 14, 2004.

#### **Emission Calculations**

See Appendix A of this document for detailed emissions calculations (pages 1 through 4).

#### **Potential To Emit of Modification**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

Pollutant	Potential To Emit (tons/year)
PM	1,309
PM-10	1,309
SO <sub>2</sub>	--
VOC	253
CO	--
NO <sub>x</sub>	--

HAP's	Potential To Emit (tons/year)
Styrene	191
MMA	61.8
MEK	0.74
TOTAL	253

### Justification for Modification

This modification is being performed through a Part 70 Significant Source Modification because: (1) the potential to emit of this modification is greater than 25 tons/yr for PM, PM10, and VOC pursuant to 326 IAC 2-7-10.5(f)(4); and (2) the potential to emit of this modification is greater than 10 tons/yr for a single HAP and greater than 25 tons/yr for any combination of HAPs pursuant to 326 IAC 2-7-10.5(f)(6). The permit modification is being performed through a Part 70 Significant Permit Modification pursuant to 326 IAC 2-7-12(d).

### County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	Attainment
SO <sub>2</sub>	Attainment
NO <sub>x</sub>	Attainment
8-Hour Ozone	Nonattainment
1-Hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for nonattainment new source review.
- (b) Elkhart County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD) and 326 IAC 2-2.
- (c) Fugitive Emissions  
 Since this type of operation is not in one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

**Source Status**

Existing Source Nonattainment NSR Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	10
PM-10	10
SO <sub>2</sub>	0
VOC	Less than 379
CO	1.0
NO <sub>x</sub>	3.0

- (a) This existing source is an Nonattainment NSR major stationary source because an nonattainment regulated pollutant (VOC) is emitted at a rate of one hundred (100) tons per year or more, and it is not in one (1) of the twenty-eight (28) listed source categories.
- (b) These emissions (except for VOC emissions) are based upon the 2001 emission inventory data from the source. The VOC emissions from the entire source are currently limited to less than 379 tons/yr, pursuant to SPM #039-17700-00002, issued on November 20, 2003.

**Potential to Emit of Modification After Issuance**

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
PTE of Lines A and B (Unit 001)	Less than 9.74	Less than 9.74	--	Less than 249	--	--	Less than 249
PTE of Panel Grinding/Trimming Station (Unit 005)	Less than 34.9	Less than 34.9	-	-	-	-	-
*Actual Emissions from Unit 001	7.12	7.12	--	217	--	--	217
*Actual Emissions from Unit 005	22.7	22.7	--	--	--	--	--
**Total PTE of this Modification	Less than 14.8	Less than 14.8	--	Less than 32.0	--	--	Less than 32.0
NSR Significant Thresholds	25	15	40	40	100	40	NA

Note: (\*)The actual emissions for units 001 and 005 are the averaged emissions for these units in 2002 and 2003, which was provided by Owens Corning Fabricating Solutions in the application received on March 16, 2004.  
 (\*\*) Total PTE of this Modification = (PTE of the Modified Units) - (Actual Emissions of the Modified Units).

This modification to an existing Nonattainment NSR major source is not major because the emission increase is less than the Nonattainment NSR significant levels. Therefore, the requirements of Nonattainment NSR do not apply.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) This source does not have a spin wool fiberglass insulation manufacturing line. Therefore, the New Source Performance Standards for Wool Fiberglass Insulation Manufacturing Plants (40 CFR Part 60.680 - 60.685, Subpart PPP) are not applicable.
- (c) This source does not apply surface coating to any business machines. Therefore, the New Source Performance Standards for Surface Coating of Plastic Parts for Business Machines (40 CFR Part 60.720 - 60.726, Subpart TTT) are not applicable.
- (d) The fiberglass panel manufacturing Lines A and B Unit (001) manufacture products with thermoset resins and gel coats. Therefore, the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Reinforced Plastic Composites Production Facilities (40 CFR Part 63.5780 - 63.5935, Subpart WWWW) are applicable. Pursuant to 40 CFR 63.5795, this source is considered an existing HAP major source under 40 CFR 63, Subpart WWWW. Therefore, it is required to comply with this NESHAP by April 21, 2006, pursuant to 40 CFR 63.5800. Since the source's current Title V permit expires on December 27, 2005, the NESHAP requirements for 40 CFR Subpart WWWW will not be addressed in this modification, or included in the permit modification. The requirements of 40 CFR 63, Subpart WWWW will be included in the source's Title V renewal permit.
- (e) This modification does involve a pollutant-specific emissions unit (Unit 005) as defined in 40 CFR 64.1:
  - (1) With the potential to emit before controls equal to or greater than the major source threshold;
  - (2) That is subject to an emission limitation or standard; and
  - (3) Uses a control device (baghouses and dust collectors) as defined in 40 CFR 64.1 to comply with that emission limitation or standard.

Therefore, Unit 005 is subject to the requirements of 40 CFR 64 (Compliance Assurance Monitoring). Since the potential to emit PM10 after control for Unit 005 is less than the Part 70 major source thresholds, the CAM requirements will be addressed in the source's Part 70 renewal permit.

### State Rule Applicability - Entire Source

#### 326 IAC 2-1.1-5 (Nonattainment NSR)

This source was constructed in 1987, and modified in 1998, 2000, 2003, and 2004 (this modification). This source is located in Elkhart County, which was redesignated as nonattainment area for 8-hour ozone standard. This source is not in 1 of 28 source categories and has potential to emit VOC greater than 100 tons/yr. Therefore, this existing source is a major source under Nonattainment NSR.

The potential to emit VOC of this modification is greater than 40 tons/yr. In order to make this modification minor, the source has proposed to limit the VOC emissions from the use of resin and gel coat in the fiberglass panel manufacturing lines A and B (Unit 001) to less than 249 tons per twelve (12) consecutive month period. Since the averaged actual VOC emissions from these lines are 217 tons/yr (based on the actual emission information in 2002 and 2003), the VOC emission increase from this modification is less than 40 tons/yr (249 tons/yr - 217 tons/yr = 32 tons/yr). Therefore, the requirements of 326 IAC 2-1.1-5 (Nonattainment NSR) are not applicable.

### 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source was constructed in 1987, and modified in 1998, 2000, 2003, and 2004 (this modification). This existing source is a NSR major source and the potential to emit of this modification before control is greater than 25 tons/yr for PM and greater than 15 tons/yr for PM10. In order to make this modification minor, the source has proposed the following requirements for Unit 005:

- (a) The PM/PM10 emissions from the trimming operations after control shall not exceed  $2.84 \times 10^{-4}$  lbs/ft<sup>2</sup>. The use of baghouses ensures compliance with this limit.
- (b) The PM/PM10 emissions from the grinding operations after control shall not exceed  $3.70 \times 10^{-3}$  lbs/ft<sup>2</sup>. The use of dust collectors and/or baghouses ensures compliance with this limit.
- (c) The total fiberglass panel input to Unit 005 shall be limited to less than 1,750,000 square feet per twelve (12) consecutive month period with compliance determined at the end of each month.

This is equivalent to 34.9 tons/yr of PM/PM10 emissions from Unit 005 (including trimming and grinding operations). The actual emissions from this unit is 22.7 tons/yr (based on the actual emission information in 2002 and 2003). Combined with the PM/PM10 emission increase from fiberglass panel manufacturing lines A and B, the PM/PM10 emission increase from this modification is less than 15 tons/yr for PM10 and less than 25 tons/yr for PM. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

### 326 IAC 2-4.1 (New Source Toxic Control)

The potential to emit HAP from this modification is greater than 10 tons per year for a single HAP and greater than 25 tons per year for any combination of HAPs. However, the modification to the existing fiberglass panel manufacturing lines A and B are not considered reconstructions to the existing lines and these existing lines are subject to 40 CFR 63, Subpart WWWW (NESHAP for Reinforced Plastic Composites Production Facilities). Therefore, the requirements of 326 IAC 2-4.1 (MACT) are not applicable to this modification.

### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### **State Rule Applicability - Fiberglass Panel Manufacturing Lines A and B (Unit 001)**

#### 326 IAC 8-1-6 (General Reduction Requirements for VOC Emissions)

The fiberglass panel manufacturing lines A and B were constructed after 1980 and each has potential VOC emissions greater than 25 tons/yr. Therefore, these two manufacturing lines are subject to the requirements of 326 IAC 8-1-6 and are required to control VOC emissions with Best Available Control Technology (BACT).

Pursuant to CP #039-4937-00002, issued on March 21, 1996, the BACT for line A was determined to be the use of air assisted airless application for gel coat, and the use of an airless application or equivalent for resin. Pursuant to CP #039-9288-00002, issued on August 6, 1998,

the BACT for line B was determined to be same as the MACT requirements for line B, which include the following:

- (a) The VHAP emission limits from the use of resins and gel coats in lines A and B (Unit 001) shall not exceed 249 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The HAP monomer contents of resins and gel coats used at line B shall not exceed the limits listed in the table below:

Material	HAP Monomer Content % by Weight
Gel Coats (including tooling gel coat)	36%
Resins (including tooling resin)	35%

- (c) Overhead mechanized spray reciprocators shall be used to apply all gel coats and resins, which minimizes overspray off the mold through proper placement of spray gun stops and spray gun pressure calibration according to guidelines published by IDEM, OAQ. The spray gun type shall be high volume low pressure (HVLP) or equivalent.
- (d) Minimizing the period of roll-out and placement of wood reinforcing panels immediately after the last resin application.

The source proposed to maintain the current VOC emission limit of 249 tons/yr for lines A and B. Since the proposed VIP resin application method is a closed molding operation which emits fewer VOCs, this modification will not increase the potential to emit VOC of the fiberglass panel manufacturing lines A and B. Therefore, no BACT analysis is required for this modification.

After this modification, the resin and gel coat application processes in lines A and B will be similar to the existing line C, which is the most recent installed fiberglass panel manufacturing line with the most stringent requirements. In order to be consistent with the BACT for the existing line C and to allow the source to use VIP resin application method for lines A and B, the source has requested to revise the BACT for lines A and B to be consistent with the requirements for line C. The proposed BACT is listed as follows:

- (a) The VHAP emission limits from the use of resins and gel coats in lines A and B (Unit 001) shall not exceed 249 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The HAP monomer content of resins and gel coats used shall be limited to the following or their equivalent on an emissions mass basis:

Type of Gel Coat or Resin	HAP Monomer Content, % by weight
Open Molding Production <sup>1</sup> Gel Coat	36
Open Molding Production Resin	35
VIP Production Resin	40

<sup>1</sup>Production refers to the manufacture of parts.

HAP monomer contents shall be calculated on a neat basis, which means excluding any filler. Compliance with these HAP monomer content limits shall be demonstrated on a monthly basis.

- (c) Non-atomized spray or equivalent application technology shall be used to apply unfilled production resins. Non-atomized spray application technology includes flow coaters, flow choppers, pressure-fed rollers, or other non-spray applications of a design and specifications approved by IDEM, OAQ.

If it is not possible to apply a portion of unfilled resins with non-atomized spray application technology, equivalent emissions reductions must be obtained via use of other emission reduction techniques. Examples of other emission reduction techniques include, but are not limited to, lower HAP monomer content resins and gel coats, closed molding, vapor suppression, vacuum bagging/bonding, or installing a control device.

Note: The source currently uses controlled spray application with covered cure to apply resin. According to the emission factors provided by Composites Fabricators Association, dated July 23, 2001, the method of controlled spray application with covered cure emits less VHAPs than the method of non-atomized spray application. The VIP method is a close molding operation, which also emits less VHAPs than the non-atomized spray application method. Therefore, the modified lines A and B will be in compliance with the revised application technology requirement.

- (d) Optimized spray techniques according to a manner approved by IDEM, OAQ shall be used for gel coats and filled resins (where fillers are required for corrosion or fire retardant purposes) at all times. Optimized spray techniques include, but are not limited to, the use of airless, air-assisted airless, high volume low pressure (HVLP), or other spray applicators demonstrated to the satisfaction of IDEM, OAQ, to be equivalent to the spray applicators listed above.

#### 326 IAC 20-25 (Reinforced Plastics Composites Fabricating Emission Units)

The potential to emit HAP of this source is greater than 10 tons/yr for a single HAP and greater than 25 tons/yr for any combination HAPs. In addition, this source has actual styrene emissions greater than 3 tons/yr. Therefore, fiberglass panel manufacturing lines A and B (Unit 001) are subject to 326 IAC 20-25 and shall comply with the following requirements on or after January 1, 2002:

#### **Emission Standards**

The Permittee shall comply with the HAP monomer content specified in 326 IAC 20-25-3(a). However, the HAP content limits in the current BACT for lines A and B are the more stringent requirements for these lines. Pursuant to 326 IAC 20-25-1(b), the more stringent requirements (HAP content limits) shall apply to fiberglass panel manufacturing lines A and B.

#### **Application Technology**

Pursuant to 326 IAC 20-25-3(b), the Permittee shall use non-atomized or manual application for resin applicators at lines A and B. Pursuant to IAC 20-25-3(b), the gel coat applicators shall be non-atomized, air-assisted airless, airless, HVLP, or the equivalent applications.

Currently, the source does not use non-atomized applicators for resin due to the poor product quality. The source uses mechanical atomized spray applicators with dry filters and will use VIP application method (close molding) for the resin applicators. The source conducts annual operator training in accordance with the procedures documented in the "Composites Fabricators Association (CFA) Controlled Spraying Handbook". Therefore, the spray applicators at this source are considered "controlled" and this has been verified by the source's inspector, Mr. Greg Wingstrom. In addition, the source uses covered cure (vacuum bagging) for the molding processes without roll-out.

Since the VOC/HAP emission factors for atomized controlled spray applicators with covered cure or close molding application methods are lower than emission factors for non-atomized spray applicators, the source is currently using better resin application technology than non-atomized application as required in 326 IAC 20-25-3. Therefore, the Permittee is allowed to use "non-atomized or equivalent" for the resin applicators at lines A and B.

### **Work Practice Standards**

Pursuant to 326 IAC 20-25-4, the following work practice standards shall be implemented:

- (a) Non-atomizing spray equipment shall not be operated at pressures that atomize the material during the application process.
- (b) Except for mixing containers as described in item (g), HAP containing materials shall be kept in a closed container when not in use.
- (c) Solvents sprayed during cleanup and resin changes shall be directed into solvent collection containers.
- (d) Solvent collection containers shall be kept closed when not in use.
- (e) Clean-up rags with solvent shall be stored in closed containers.
- (f) Closed containers shall be used for the storage of the following:
  - (1) All production and tooling resins that contain HAPs.
  - (2) All production and tooling gel coats that contain HAPs.
  - (3) Waste resins and gel coats that contain HAPs.
  - (4) Cleaning materials, including waste cleaning materials.
  - (5) Other materials that contain HAPs.
- (g) All resin and gel coat mixing containers with a capacity equal to or greater than fifty-five (55) gallons must have a cover with no visible gaps in place at all times except when material is being added to or removed from a container, or when mixing or pumping equipment is being placed in or removed from a container.

### **Operator Training**

Pursuant to 326 IAC 20-25-8, all new and existing personnel, including contract personnel, who are involved in resin and gel coat spraying and spray-like applications (for example, those applications that could result in excess emissions if performed improperly) shall be trained according to the following schedule:

- (a) All personnel hired after March 7, 2001 shall be trained within fifteen (15) days of hiring.
- (b) All personnel hired before March 7, 2001 shall be trained or evaluated by a supervisor within thirty (30) days of the start of operation.
- (c) To ensure training goals listed in subsection (b) are maintained, all personnel shall be given refresher training annually.
- (d) Personnel who have been trained by another owner or operator subject to 326 IAC 20-25 are exempt from subdivision (a) if written documentation that the employee's training is current is provided to the new employer.
- (e) If the result of an evaluation shows that training is needed, such training shall occur within fifteen (15) days of the evaluation.

- (f) The lesson plans shall cover, for the initial and refresher training, at a minimum, all of the following topics:
  - (1) Appropriate application techniques.
  - (2) Appropriate equipment cleaning procedures.
  - (3) Appropriate equipment setup and adjustment to minimize material usage and overspray.
- (g) The owner or operator shall maintain the following training records on site and available for inspection and review:
  - (1) A copy of the current training program.
  - (2) A list of all current personnel, by name, that are required to be trained and the dates they were trained and the date of the most recent refresher training. Records of prior training programs and former personnel are not required to be maintained.

**326 IAC 6-3-2 (Process Operations)**

On June 12, 2002, revisions to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) became effective; this rule was previously referred to as 326 IAC 6-3 (Process Operations). As of the date this permit is being issued, these revisions have not been approved by EPA into the Indiana State Implementation Plan (SIP); therefore, the following requirement from the previous version of 326 IAC 6-3 (Process Operations), which has been approved into the SIP, remains an applicable requirement until the revisions to 326 IAC 6-3 are approved into the SIP and the condition is modified in a subsequent permit action.

Pursuant to 40 CFR 52, Subpart P, the particulate matter (PM) from each of the fiberglass panel manufacturing lines A and B (Unit 001) shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Pursuant to the revised 326 IAC 6-3-2(d), particulate from these spray applicators shall be controlled by dry filters, or equivalent control devices, and the Permittee shall operate the control device in accordance with manufacturer's specifications. This source currently uses dry filters to control overspray. Therefore, fiberglass panel manufacturing lines A and B are in compliance with 326 IAC 6-3-2.

**State Rule Applicability - Woodworking and Finishing Operations**

**326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)**

The source requested to correct the maximum throughput rate for the existing woodworking and finishing operations (002, 004, 005, 006, 007 and 008) due to incorrect information submitted during the review of SPM #039-17700-00002, issued on November 20, 2003. Pursuant to 326 IAC 6-3-2, particulate emissions from Units 002, 004, 005, 006, 007 and 008 shall be limited to less than the emission rates listed in the table below:

Unit ID	Max. Throughput Rate (lbs/hr)	Particulate Emission Limit (lbs/hr)
002	5,063	7.64

Unit ID	Max. Throughput Rate (lbs/hr)	Particulate Emission Limit (lbs/hr)
004	5,063	7.64
005	11,050	12.9
006	5,525	8.10
007	5,525	8.10
008	5,525	8.10

The pounds per hour limitation was calculated using the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The use of baghouses or dust collectors ensures compliance with these limits.

### Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The spray applicators in fiberglass panel manufacturing lines A and B (Unit 001) have applicable compliance monitoring conditions as specified below:
  - (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the stacks 25 through 45 while one or more of the spray applicators are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
  - (b) Monthly inspections shall be performed of the emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance

Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission occurs or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These monitoring conditions are necessary because these spray applicators must operate properly to ensure compliance with 40 CFR 52, Subpart P.

- 2. The panel grinding/trimming station for lines A and B (Unit 005), which is controlled by dust collectors and a baghouse, has applicable compliance monitoring conditions as specified below:
  - (a) Visible emissions notations of the stack exhaust of Unit 005 (stack S005) shall be performed daily during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
  - (b) The Permittee shall monitor and record the pressure drop for the baghouse at least once per week when Unit 005 is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within 2.0 and 4.0 inches of water, or a range established during the latest compliant stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside the above mention range.
  - (c) All defective bags shall be replaced. In the event that bag failure has been observed:
    - (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. If operations continue after bag failure is observed and it will be ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit.

These monitoring conditions are necessary because the baghouse and dust collectors equipped with Unit 005 must operate properly to ensure compliance with 326 IAC 6-3-2 (Manufacturing Processes).

## Proposed Changes

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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The Permittee owns and operates a fiberglass panel manufacturing operation.

Responsible Official:	Plant Manager
Source Address:	16710 Maple Drive, Goshen, Indiana 46526
Mailing Address:	16710 Maple Drive, Goshen, Indiana 46526
Phone Number:	(574) 534-3447
SIC Code:	3089
County Location:	Elkhart
Source Location Status:	<b>Nonattainment for ozone under 8-hour standard</b> Attainment for all <b>other</b> criteria pollutants
Source Status:	Part 70 Permit Program Major Source under <b>PSD Nonattainment NSR Rules</b> ; Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) fiberglass panel manufacturing line, identified as the "A" line and Unit 001, consisting of ~~three (3) fiberglass panel reciprocators, each equipped with one (1) optimized spray or equivalent gel coat application system, and one (1) non-atomized or equivalent resin application system~~ **with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system**, with dry filters for overspray **control**, and exhausting at eleven (11) stacks, identified as SV-25 through SV-35. ~~Only two (2) of the three (3) reciprocators may be operated simultaneously, with the third reciprocator used as a back-up.~~ (Constructed in 1987, **and modified in 2004**)
- (b) One (1) fiberglass panel manufacturing line, identified as the "B" line and Unit 001, consisting of ~~two (2) fiberglass panel reciprocators, each equipped with one (1) optimized spray or equivalent gel coat application system, and one (1) non-atomized or equivalent resin application system~~ **with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system**, with dry filters for overspray **control**, and exhausting to **ten (10)** ~~twelve (12)~~ stacks designated as SV-36 through SV-~~45~~**47**. (Constructed in 1998 **and modified in 2004**)
- (c) One (1) fiberglass panel manufacturing line, identified as the "C" line and Unit 003, consisting of two (2) optimized spray or equivalent gel coat application systems, one (1) non-atomized or equivalent resin application system with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system, exhausting through five (5) stacks designated as CEX1-CEX5, with dry filters for overspray. (Constructed in 2000 and modified in 2003)

- (d) One (1) Lauan woodworking station for lines A, B, and C, identified as Unit 002, with a maximum raw material input rate of ~~265~~ **5,063** pounds per hour, consisting of one (1) wide belt sander, one (1) table saw, one (1) chop saw, and one (1) panel saw, all controlled by one (1) Honeyville baghouse, exhausting to stack S002. (Constructed in 1988)
- (e) One (1) standby woodworking shop equipment for lines A, B, and C, identified as Unit 004, with a maximum throughput rate of ~~265~~ **5,063** pounds of raw material per hour, consisting of one (1) wide belt sander, controlled by one (1) Torit cyclone/dust collector exhausting to stack S004. (Constructed in 1998 and 2000)
- (f) One (1) panel grinding/trimming station for lines A and B, identified as Unit 005, with a maximum raw material input rate of ~~4,414~~ **11,050** lb/hr, consisting of **the following (constructed in 1988 and modified in 1998 and 2004):**
  - (1) **One (1) trimming operation, including** one (1) CNC panel saw, two (2) hand saws, and **one (1) vertical saw**, ~~four (4) hand grinders~~, controlled by one (1) baghouse (CDC1), exhausting to stack S005. ~~(Constructed in 1988 and 1998)~~
  - (2) **One (1) grinding operation, including four (4) hand grinders, each controlled by a high efficiency dust collector and/or baghouse CDC1.**
- (g) One (1) panel CNC saw for line C, identified as Unit 006, with a maximum throughput rate of ~~627~~ **5,525** pounds of raw material per hour, controlled by one (1) UAS dust collector (Dust Hog) and one (1) UAS interior baghouse, exhausting to stack S006. (Constructed in 2000)
- (h) Two (2) panel grinding machines for line C, identified as Unit 007, each with a maximum raw material input rate of ~~627~~ **5,525** pounds per hour, controlled by ~~one (1) RUWAG portable drum dust collector, one (1) UAS dust collector (Dust Hog), and one (1) UAS interior baghouse~~ **and one (1) exterior baghouse**, exhausting to stack S006. **This unit may also controlled by additional high efficiency dust collectors or portable drum dust collectors.** (Constructed in 2000)
- (i) One (1) vertical saw for Line C, identified as 008, with a maximum throughput rate of ~~627~~ **5,525** pounds of raw materials per hour, controlled by one (1) UAS dust collector (Dust Hog) and one (1) UAS interior baghouse, and exhausting to stack S006. (Constructed in 2002)

**SECTION D.1**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (a) One (1) fiberglass panel manufacturing line, identified as the "A" line and Unit 001, consisting of ~~three (3) fiberglass panel reciprocators, each equipped with one (1) optimized spray or equivalent gel coat application system, and one (1) non-atomized or equivalent resin application system~~ **with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system**, with dry filters for overspray **control**, and exhausting at eleven (11) stacks, identified as SV-25 through SV-35. ~~Only two (2) of the three (3) reciprocators may be operated simultaneously, with the third reciprocator used as a back-up.~~ (Constructed in 1987, **and modified in 2004**)
- (b) One (1) fiberglass panel manufacturing line, identified as the "B" line and Unit 001, consisting of ~~two (2) fiberglass panel reciprocators, each equipped with one (1) optimized spray or equivalent gel coat application system, and one (1) non-atomized or equivalent resin application system~~ **with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system**, with dry filters for overspray **control**, and exhausting to ~~twelve (12)~~**ten(10)** stacks designated as SV-36 through SV-47**45**. (Constructed in 1998 **and modified in 2004**)
- (c) One (1) fiberglass panel manufacturing line, identified as the "C" line and Unit 003, consisting of two (2) optimized spray or equivalent gel coat application systems, one (1) non-atomized or equivalent resin application system with covered cure, and one (1) Vacuum Infusion Process (VIP) resin application system, exhausting through five (5) stacks designated as CEX1-CEX5, with dry filters for overspray. (Constructed in 2000 and modified in 2003)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**D.1.2 New Source Toxics Control [326 IAC 2-4.1-1] [326 IAC 8-1-6] [326 IAC 2-2][326 IAC 2-1.1-5]**

- (a) Pursuant to the MACT determination under 326 IAC 4-1-1 and CP No. 039-9288-00002, issued on August 6, 1998, the operating conditions for the fiberglass panel manufacturing line, identified as the "B" line, shall be the following:
  - (1) Use of resins and gel coats shall be limited such that the potential to emit (PTE) volatile organic HAP from resins and gel coats from lines "A" and "B" shall be limited to less than 249 tons per twelve (12) consecutive month period with compliance determined at the end of each month, such that the requirements of 326 IAC 2-2 (PSD Rules) do not apply. The VOC usage limit for line "B" is required as a component of the MACT determination and compliance with this limit shall be determined based upon the following criteria:
    - (A) Monthly usage by weight, monomer content, method of application, and other emission reduction techniques for each gel coat and resin shall be recorded. Volatile organic HAP emissions shall be calculated by multiplying the usage of each gel coat and resin by the emission factor that is appropriate for the monomer content, method of application, and other emission reduction techniques for each gel coat and resin, and summing the emissions for all gel coats and resins. Emission factors shall be obtained from the reference approved by IDEM, OAQ.
    - (B) Until such time that new emissions information is made available by U.S. EPA in its AP-42 document or other U.S. EPA approved form, emission factors shall be taken from the following reference approved by IDEM: OAQ: "Unified Emission Factors for Open Molding of Composites, July

~~23, 2001". The emission factors used for monomers that is styrene shall not exceed 32.3% styrene emitted per weight of gel coat applied and 17.7% styrene emitted per weight of resin applied. For the purposes of these emission calculations, monomer in resins and gel coats that is not styrene or methyl methacrylate shall be considered as styrene on an equivalent weight basis.~~

- ~~(2) Resins and gel coats used, including filled resins and tooling resins and gel coats, shall be limited to maximum monomer contents of thirty six percent (36%) by weight for resins and thirty five percent (35%) by weight for gel coats or their equivalent on an emissions mass basis. Monomer contents shall be calculated on a neat basis. i.e., excluding any filler. Compliance with these monomer content limits shall be demonstrated on a monthly basis.~~
  - ~~(3) Overhead mechanized spray reciprocators shall be used to apply all gel coats and resins, which minimizes overspray off the mold through proper placement of spray gun stops and spray gun pressure calibration according to guidelines published by IDEM, OAG. The spray gun type shall be high volume low pressure (HVLP) or equivalent. HVLP spray is the technology used to apply material to substrate by means of application equipment that operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.~~
  - ~~(4) Minimizing the period of roll-out and placement of wood reinforcing panels immediately after the last resin application.~~
- ~~(b) Pursuant to the MACT determination under 326 IAC 4.1-1 and 326 IAC 8-1-6 (BACT), the operating conditions for the fiberglass panel manufacturing line, identified as the "C" line, shall be the following:~~

**Pursuant to the 326 IAC 4.1-1 (MACT) and 326 IAC 8-1-6 (BACT), the Permittee shall comply with the following requirements for the fiberglass panel manufacturing lines A, B, and C:**

- (a) Pursuant to CP #039-9228-00002, issued on August 6, 1998, use of resins and gel coats in lines A and B shall be limited such that the potential to emit (PTE) volatile organic HAP from use of such resins and gel coats only shall be less than 249 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This also makes the requirements of 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the modification in 2004.**
- (4b) Pursuant to SSM #039-17785-00002, issued on November 5, 2003, use of resins and gel coats that contain styrene in line C shall be limited such that the potential to emit (PTE) volatile organic HAP from use of such resins and gel coats only shall be less than 129.6 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit ensures the net VOC increase is less than 40 tons/yr for the modification in 2003 and makes the requirements of 326 IAC 2-2 (PSD) not applicable. Compliance with this limit shall be determined based upon the following criteria:**
  - (c) Compliance with the emission limits in (a) and (b) of this condition shall be determined based upon the following criteria:**
    - (A1) Monthly usage by weight, content of monomer that is HAP, method of application, and other emission reduction techniques used for each gel coat and resin shall be recorded. Volatile organic HAP emissions shall be calculated by multiplying the usage of each gel coat and resin by the emission factor that is**

appropriate for the HAP monomer content, method of application, and other emission reduction techniques used for each gel coat and resin, and summing the emissions for all gel coats and resins. Emission factors shall be obtained from the reference approved by IDEM, OAQ.

(B2) The emission factors approved for use by IDEM, OAQ for open molding processes shall be taken from the following reference: "Unified Emission Factors for Open Molding of Composites," Composites Fabricators Association, July 23, 2001. The emission factor for the VIP application system (closed molding) is 1% by weight of the HAP monomer content, which is provided by the American Composites Manufacturers Association (ACMA). For the purposes of these emission calculations, HAP monomer in resins and gel coats that is not styrene or methyl methacrylate shall be considered as styrene on an equivalent weight basis.

(Cd) The HAP monomer content of resins and gel coats used shall be limited to the following or their equivalent on an emissions mass basis:

Type of Gel Coat or Resin	HAP Monomer Content, % by weight
Open Molding Production 1 Gel Coat	36
Open Molding Production Resin	35
VIP Production Resin	40

<sup>1</sup>Production refers to the manufacture of parts.

HAP monomer contents shall be calculated on a neat basis, which means excluding any filler. Compliance with these HAP monomer content limits shall be demonstrated on a monthly basis.

(De) Non-atomized spray or equivalent application technology shall be used to apply unfilled production resins. Non-atomized spray application technology includes flow coaters, flow choppers, pressure-fed rollers, or other non-spray applications of a design and specifications approved by IDEM, OAQ.

If it is not possible to apply a portion of unfilled resins with non-atomized spray application technology, equivalent emissions reductions must be obtained via use of other emission reduction techniques. Examples of other emission reduction techniques include, but are not limited to, lower HAP monomer content resins and gel coats, closed molding, vapor suppression, vacuum bagging/bonding, or installing a control device.

(Ef) Optimized spray techniques according to a manner approved by IDEM, OAQ shall be used for gel coats and filled resins (where fillers are required for corrosion or fire retardant purposes) at all times. Optimized spray techniques include, but are not limited to, the use of airless, air-assisted airless, high volume low pressure (HVLP), or other spray applicators demonstrated to the satisfaction of IDEM, OAQ, to be equivalent to the spray applicators listed above.

HVLP spray is the technology used to apply material to substrate by means of application equipment that operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

(eg) The listed work practices shall be followed for the fiberglass panel manufacturing lines "A", "B", and "C":

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D.1.5 Particulate Matter (PM) [40 CFR 52, Subpart P]

- (a) Pursuant to GP No. 039-4937-00002, issued on March 21, 1996 and 40 CFR 52, Subpart P, the particulate matter (PM) from **each of** the fiberglass panel manufacturing lines **A, B, and C** identified as the "A" line, shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- ~~(b) Pursuant to CP No. 039-9288-00002, issued on August 6, 1998 and 40 CFR 52, Subpart P, the fiberglass panel manufacturing line, identified as the "B" line, shall be limited by the following:-~~

~~Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:-~~

$$~~E = 4.10 P^{0.67} \quad \text{where} \quad E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}~~$$

~~Where the allowable PM emission rate from the fiberglass panel manufacturing line, identified as the "B" line shall not exceed 1.88 pounds per hour.-~~

- ~~(c) Pursuant to SPM No. 039-12284-00002, issued on October 13, 2000 and 40 CFR 62, Subpart P, the particulate matter emissions from the fiberglass panel manufacturing line, identified as the "C" line, shall not exceed 4.08 lb/hr based on the following equation:-~~

$$~~E = 4.10 P^{0.67} \quad \text{where} \quad E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}~~$$

D.1.10 Visible Emissions Notations-

- ~~(a) Weekly visible emission notations of all exhaust to the atmosphere from the line "A", line "B", and line "C" fiberglass panel manufacturing lines' stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.~~
- ~~(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.~~
- ~~(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.~~
- ~~(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.~~
- ~~(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.~~

**D.1.1110 Monitoring**

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- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters, when the lines are in operation. **To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the stacks 25 through 45, and stacks CEX1 through CEX5 while one or more of the spray applicators are in operation.** The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a ~~violation of~~ **deviation from** this permit.
  
- (b) Monthly inspections shall be performed of the particulate emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a ~~violation of~~ **deviation from** this permit.

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**D.1.1211 Record Keeping Requirements**

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- .....
- (b) To document compliance with Condition D.1.1110, the Permitted shall maintain a log of **weekly overspray observations**, daily and ~~weekly~~ **monthly** inspections ~~of the filters~~, and those additional inspections prescribed by the Preventive Maintenance Plan.
  
- ~~(c) To document compliance with Condition D.1.10, the Permittee shall maintain records of weekly visible emission notations of the spray applicators' stack exhausts.~~
  
- ~~(dc)~~ To document compliance with Condition D.1.4, the Permittee shall maintain the following training records:

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**D.1.1312 Reporting Requirements**

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A quarterly summary of the information to document compliance with Conditions **D.1.2(a) and (b)** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**SECTION D.2 FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]:**

- (d) One (1) Lauan woodworking station for lines A, B, and C, identified as Unit 002, with a maximum raw material input rate of ~~265~~ **5,063** pounds per hour, consisting of one (1) wide belt sander, one (1) table saw, one (1) chop saw, and one (1) panel saw, all controlled by one (1) Honeyville baghouse, exhausting to stack S002. (Constructed in 1988)
- (e) One (1) standby woodworking shop equipment for lines A, B, and C, identified as Unit 004, with a maximum throughput rate of ~~265~~ **5,063** pounds of raw material per hour, consisting of one (1) wide belt sander, controlled by one (1) Torit cyclone/dust collector exhausting to stack S004. (Constructed in 1998 and 2000)
- (f) One (1) panel grinding/trimming station for lines A and B, identified as Unit 005, with a maximum raw material input rate of ~~4,414~~ **11,050** lb/hr, consisting of **the following (constructed in 1988 and modified in 1998 and 2004):**
  - (1) **One (1) trimming operation, including** one (1) CNC panel saw, two (2) hand saws, and **one (1) vertical saw, four (4) hand grinders**, controlled by one (1) baghouse (CDC1), exhausting to stack S005. ~~(Constructed in 1988 and 1998)~~
  - (2) **One (1) grinding operation, including four (4) hand grinders, each controlled by a high efficiency dust collector and/or baghouse CDC1.**
- (g) One (1) panel CNC saw for line C, identified as Unit 006, with a maximum throughput rate of ~~627~~ **5,525** pounds of raw material per hour, controlled by one (1) UAS dust collector (Dust Hog) and one (1) UAS interior baghouse, exhausting to stack S006. (Constructed in 2000)
- (h) Two (2) panel grinding machines for line C, identified as Unit 007, each with a maximum raw material input rate of ~~627~~ **5,525** pounds per hour, controlled by ~~one (1) RUWAC portable drum dust collector, one (1) UAS dust collector (Dust Hog), and one (1) UAS interior baghouse~~ **and one (1) exterior baghouse**, exhausting to stack S006. **This unit may also controlled by additional high efficiency dust collectors or portable drum dust collectors.** (Constructed in 2000)
- (i) One (1) vertical saw for Line C, identified as 008, with a maximum throughput rate of ~~627~~ **5,525** pounds of raw materials per hour, controlled by one (1) UAS dust collector (Dust Hog) and one (1) UAS interior baghouse, and exhausting to stack S006. (Constructed in 2002)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]**

Particulate emissions from the operations 002, 004, 005, 006, 007 and 008 shall be limited to the emission limits listed in the table below:

Unit ID	Max. Throughput Rate (lbs/hr)	Particulate Emission Limit (lbs/hr)
002	<del>265</del> <b>5,063</b>	<del>4.06</del> <b>7.64</b>
004	<del>265</del> <b>5,063</b>	<del>4.06</del> <b>7.64</b>
005	<del>4,414</del> <b>11,050</b>	<del>3.25</del> <b>12.9</b>
006	<del>627</del> <b>5,525</b>	<del>4.89</del> <b>8.10</b>

Unit ID	Max. Throughput Rate (lbs/hr)	Particulate Emission Limit (lbs/hr)
007	<del>627</del> 5,525	<del>4.89</del> 8.10
008	<del>627</del> 5,525	<del>4.89</del> 8.10

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**D.2.2 PSD Minor Modification Limits [326 IAC 2-2]**

- (a) Pursuant to In order to make the requirements of 326 IAC 2-2 (PSD) not applicable,** the PM and PM10 emissions from operations 002, 004, 006, 007, and 008 shall not exceed the emissions limits listed in the table below:

Unit ID	PM10 Emission Limit (lbs/hr)	PM Emission Limit (lbs/hr)
002	0.21	0.42
004	0.92	1.80
006, 007, and 008	1.14	2.24

This is equivalent to 9.94 tons/yr of PM10 emissions and 19.5 tons/yr of PM emissions. Combined with the PM/PM10 emissions from fiberglass panel manufacturing line C (003), the particulate emissions from this Significant Source Modification #039-17785-00002; are limited to less than 15 tons/yr for PM10 and less than 25 tons/yr for PM. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

- (b) In order to make the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following:**
- (1) The PM/PM10 emissions from the trimming operations after control shall not exceed  $2.84 \times 10^{-4}$  lbs/ft<sup>2</sup>.**
  - (2) The PM/PM10 emissions from the grinding operations after control shall not exceed  $3.70 \times 10^{-3}$  lbs/ft<sup>2</sup>.**
  - (3) The total fiberglass panel input to Unit 005 shall be limited to less than 1,750,000 square feet per twelve (12) consecutive month period with compliance determined at the end of each month.**

**This is equivalent to 34.9 tons/yr of PM/PM10 emissions from Unit 005. Combined with the PM/PM10 emission increase from fiberglass panel manufacturing lines A and B, the particulate emission increases from SSM #039-18680-00002 are limited less than 15 tons/yr for PM10 and less than 25 tons/yr for PM.**

#### D.2.5 Visible Emissions Notations

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- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. **Failure to take response steps in accordance with Section C - Compliance Response Plan shall be considered a deviation from this permit.**

#### D.2.6 Parametric Monitoring

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The Permittee shall record the total static pressure drop across the baghouses and dust collectors used in conjunction with the woodworking and finishing operations 002, 004, 005, 006, 007, and 008, at least once a week when these woodworking and finishing operations are in operation and venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 2.0 and 4.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for anyone reading. **A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan shall be considered a deviation from this permit.**

#### D.2.8 Broken or Failed Bag Detection

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In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) **business** hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) **business** hours of discovery of the failure and shall include a timetable for completion. **Failure to take response steps in accordance with Section C - Compliance Response Plan, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**
- (b) For single compartment baghouses, **if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then** failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### **D.2.9 Record Keeping Requirements**

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- (a) To document compliance with Condition D.2.2(b)(3), the Permittee shall maintain monthly records of the total surface area of the fiberglass panels input to Unit 005.**
- (ab)** To document compliance with Condition D.2.5, the Permittee shall maintain daily visible emission notations of the woodworking stations stack exhaust.
- (bc)** To document compliance with Condition D.2.6, the Permittee shall maintain the weekly records of the total static pressure drop during normal operation when venting to the atmosphere.
- (ed)** To document compliance with Condition D.2.7, the Permittee shall maintain records of the results of the inspections required under Condition D.2.7.
- (de)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **D.2.10 Reporting Requirements**

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**A quarterly summary of the information to document compliance with Condition D.2.2(b)(3) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance Data Section**

**Part 70 Quarterly Report**

**Source Name:** Owens Corning Fabricating Solutions  
**Source Address:** 16710 Maple Drive, Goshen, Indiana 46526  
**Mailing Address:** 16710 Maple Drive, Goshen, Indiana 46526  
**Part 70 Permit No.:** 039-6091-00002  
**Facility:** Unit 005  
**Parameter:** Total surface area of the fiberglass panels processed  
**Limit:** Less than 1,750,000 square feet per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## **Conclusion**

The construction of this proposed modification shall be subject to the conditions of the proposed Part 70 Significant Source Modification No. 039-18680-00002. The operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. 039-18917-00002.

**Appendix A: Emission Calculations**  
**Reinforced Plastics and Composites Open Molding Operations**  
**HAPs Emissions**  
**From Fiberglass Panel Manufacturing Lines A and B (#001)**

**Company Name: Owens Corning Fabricating Solutions**  
**Address: 16710 Maple City Dr., Goshen, IN 46526**  
**SSM: 039-18680-00002**  
**Reviewer: ERG/YC**  
**Date: June 15, 2004**

Application Method	Coatings	Density (lbs/hr)	Max. Production Rate (unit/hr)	Max. Coating Usage (gal/unit)	Maximum Usage (lbs/hr)	Weight % Styrene	*Emission Factor for Styrene (lbs/ton)	PTE of Styrene (tons/yr)	Weight % MMA	*Emission Factor for MMA (lbs/ton)	PTE of MMA (tons/yr)	Weight % MEK	**Emission Factor for MEK (lbs/ton)	PTE of MEK (tons/yr)
Gelcoat Controlled Spray Application with Covered Cure (without roll-out)	Gel Coat	10.25	9.00	5.10	470	36.0%	143	147	4.0%	60	61.8	0.0%	0	0.00
VIP with Covered Cure (without roll-out)	Resin	9.25	9.00	11.9	991	35.0%	20.0	43.4	0.0%	0	0.00	0.0%	0	0.00
	Catalyst	9.75	8.41	0.21	16.8	0.0%	0	0.0	0.0%	0	0.00	1.0%	20	0.74
<b>Total</b>								<b>191</b>			<b>61.8</b>			<b>0.74</b>

\* Styrene emission factor for gel coat is based on "Unified Emission Factors for Opening Molding of Composites" (Jul 23, 2001) and the unit is pounds of HAP per ton resin/gel coat processed.

Styrene emission factor for VIP application method is the emission factor for closed molding process from the website of American Composites Manufacturers Association (ACMA).

\*\*The emission factor for MEK = 2000 lb/ton x Weight % MEK (Assume all the MEK contained in the catalyst evaporates).

**Total Potential to Emit HAPs =**

**253 tons/yr**

**METHODOLOGY**

Potential to Emit HAPs (tons/yr) = Max. Usage (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs x Emission Factor (lb/ton) x 1 tons/2000 lbs

**Appendix A: Emission Calculations**  
**Reinforced Plastics and Composites Open Molding Operations**  
**VOC and PM/PM10 Emissions**  
**From Fiberglass Panel Manufacturing Lines A and B (#001)**

**Company Name: Owens Corning Fabricating Solutions**  
**Address: 16710 Maple City Dr., Goshen, IN 46526**  
**SSM: 039-18680-00002**  
**Reviewer: ERG/YC**  
**Date: June 15, 2004**

Application Method	Coatings	Density (lbs/gal)	Weight % VOC	Max. Production Rate (unit/hr)	Max. Coating Usage (gal/unit)	Maximum Usage (lbs/hr)	*VOC Emission Factor (lbs/ton)	PTE of VOC (lbs/hr)	PTE of VOC (lbs/day)	PTE of VOC (tons/yr)	**PTE of PM/PM10 before Control (lbs/hr)	**PTE of PM/PM10 before Control (tons/yr)	***Transfer Efficiency	****PM/PM10 Control Efficiency	PTE of PM/P10 after Control (lbs/hr)	PTE of PM/P10 after Control (tons/yr)
Gelcoat Controlled Spray Application with Covered Cure (without roll-out)	Gel Coat	10.25	40.0%	9.00	5.10	470	203	47.8	1146	209	2.82	12.4	99%	76%	0.68	2.97
VIP with Covered Cure (without roll-out)	Resin	9.25	35.0%	9.00	11.9	991	20.0	9.9	238	43.4	6.44	28.2	99%	76%	1.55	6.77
	Catalyst	9.75	1.00%	8.41	0.21	16.8	20.0	0.17	4.03	0.74	0.00	0.00	100%	0%	0.00	0.00
<b>Total</b>										<b>253</b>		<b>40.6</b>				<b>9.74</b>

\* The emission factors for gel coat and resin are the sum of the emission factors for styrene and MMA in page 1 of TSD Appendix A.

The VOC emission factor for catalyst = 2000 lb/ton x Weight % VOC (assume that all the VOCs contained in the catalyst evaporate).

\*\* Assume all the PM emissions equal PM10 emissions.

\*\*\* The transfer efficiency and control efficiency are from the "Draft Guide to the Estimation and Permitting of PM from the Manufacture of Reinforced Plastic Composites" by CFA in August, 2001.

\*\*\*\* The PM control efficiency includes 85% capture efficiency and 95% control efficiency for dry filters.

#### METHODOLOGY

Max. Usage (lbs/hr) = Max. Production Rate (unit/hr) x Max. Coating Usage (gal/unit) x Density (lbs/gal)

PTE of VOC (lbs/hr) = Max. Usage (lbs/hr) x 1 ton/2000 lbs x Emission Factor (lbs/ton)

PTE of VOC (lbs/day) = Max. Usage (lbs/hr) x 1 ton/2000 lbs x Emission Factor (lbs/ton) x 24 hr/day

PTE of VOC (tons/yr) = Max. Usage (lbs/hr) x 1 ton/2000 lbs x Emission Factor (lbs/ton) x 8760 hr/yr x 1 ton/2000 lbs

PTE of PM/PM10 before Control (lbs/hr) = Max. Usage (lbs/hr) x (1 - Weight % VOC) x (1 - Transfer Efficiency)

PTE of PM/PM10 before Control (tons/yr) = Max. Usage (lbs/hr) x (1 - Weight % VOC) x (1 - Transfer Efficiency) x 8760 hr/yr x 1 ton/2000 lbs

PTE of PM/PM10 after Control (lbs/hr) = PTE of PM/PM10 before Control (lbs/hr) x (1 - Control Efficiency)

PTE of PM/PM10 after Control (tons/yr) = PTE of PM/PM10 before Control (lbs/hr) x (1 - Control Efficiency) x 8760 hr/yr x 1 ton/2000 lbs

**Appendix A: Emission Calculations  
Actual PM10 and PM10 Emissions  
From the Panel Grinding/Trimming Operations (005)**

**Company Name: Owens Corning Fabricating Solutions  
Address: 16710 Maple City Dr., Goshen, IN 46526  
SSM: 039-18680-00002  
Reviewer: ERG/YC  
Date: June 15, 2004**

Process	*PM/PM10 Emission Factor (lbs/ft <sup>2</sup> )	Max. Throughput Rate (ft <sup>2</sup> /hr)	PTE of PM/PM10 before Control (lbs/hr)	PTE of PM/PM10 before Control (tons/yr)	Control Efficiency (%)	PTE of PM/PM10 after Control (lbs/hr)	Annual Throughput Limit (ft <sup>2</sup> /yr)	Limited PTE of PM/PM10 after Control (tons/yr)
Trimming	6.37E-03	3,240	20.6	90.4	95.54%	0.92	17,500,000	2.49
Grinding	8.30E-02	3,240	269	1,178	95.54%	12.0	17,500,000	32.4
<b>Total</b>				<b>1,268</b>				<b>34.9</b>

\* This is provided by the source based on the density of the panel and cutting length for each panel. The emissions from the new vertical saw has been included also.

**Methodology**

PTE of PM/PM10 before Control (lbs/hr) = Max. Throughput Rate (ft<sup>2</sup>/hr) x Emission Factor (lbs/ft<sup>2</sup>)

PTE of PM/PM10 before Control (tons/yr) = Max. Throughput Rate (ft<sup>2</sup>/hr) x Emission Factor (lbs/ft<sup>2</sup>) x 8760 hrs/yr x 1 ton/2000 lbs

PTE of PM/PM10 after Control (lbs/hr) = Max. Throughput Rate (ft<sup>2</sup>/hr) x Emission Factor (lbs/ft<sup>2</sup>) x (1-Control Efficiency)

Limited PTE of PM/PM10 after Control (tons/yr) = Limited Throughput Rate (ft<sup>2</sup>/yr) x Emission Factor (lbs/ft<sup>2</sup>) x 1 ton/2000 lbs x (1-Control Efficiency)

**Appendix A: Emission Calculations  
Actual PM10 and PM10 Emissions  
From the Panel Grinding/Trimming Operations (005)**

**Company Name: Owens Corning Fabricating Solutions  
Address: 16710 Maple City Dr., Goshen, IN 46526  
SSM: 039-18680-00002  
Reviewer: ERG/YC  
Date: June 15, 2004**

Process	*PM/PM10 Emission Factor (lbs/ft <sup>2</sup> )	Actual Throughput Rate in 2002 (ft <sup>2</sup> /yr)	Actual Throughput Rate in 2003 (ft <sup>2</sup> /yr)	Control Efficiency (%)	Actual PM/PM10 Emission in 2002 (tons/yr)	Actual PM/PM10 Emission in 2003 (tons/yr)	Averaged Actual PM/PM10 Emissions (tons/yr)
Trimming	3.18E-03	12,419,992	11,181,414	95.54%	0.88	0.79	0.84
Grinding	8.30E-02	12,419,992	11,181,414	95.54%	23.0	20.7	21.8
<b>Total</b>							<b>22.7</b>

\* This is provided by the source based on the density of the panel and cutting length for each panel.

**Methodology**

Actual Emissions (tons/yr) = Actual Throughput Rate (ft<sup>2</sup>/yr) x Emission Factor (lbs/ft<sup>2</sup>) x 1 ton/2000 lbs

Averaged Actual Emissions = [ Actual Emissions in 2002 (tons/yr) + Actual Emissions (tons/yr) ]/2