

Ms. Christy Miller
Tower Structural Laminating, Inc.
Post Office Box 463
Goshen, Indiana 47526

Re: 113-12529
Significant Source Modification to:
Part 70 permit No: T 113-7113-00049

Dear Ms. Miller:

Tower Structural Laminating, Inc., was issued a Part 70 permit T 113-7113-00049 on April 18, 2000 for the manufacture of fiberglass reinforced plywood panels. An application to modify the source was received on August 4, 2000. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

- (a) One (1) Fluid Impingement Technology attached to the Continuous Lamination Machine, identified as SV1-4, with a maximum capacity of gel coating 299.25 pounds of fiberglass reinforced plywood panels per hour, no particulate control equipment no external exhaust.
- (b) One (1) gel coat storage tank, with a maximum capacity of 4,000 gallons.

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 Management (OAM).
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(l), 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.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The proposed operating conditions applicable to these emission units are attached to this Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 operating permit as an administrative amendment in accordance with 326 IAC 2-7-10.5(l)(1) and 326 IAC 2-7-11.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. Pursuant to Contract No. A305-0-00-36, IDEM, OAM has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Regi Oommen, ERG, P.O. Box 2010, Morrisville, North Carolina 27560, or call (919) 468-7829 to speak directly to Mr. Oommen. Questions may also be directed to Duane Van Laningham at IDEM, OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments

ERG/RGO

cc: File - Noble County
U.S. EPA, Region V
Noble County Health Department
Air Compliance Section Inspector - Doyle Houser
Compliance Data Section - Jerry Curless
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

SECTION D.2

FACILITY OPERATION CONDITIONS

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

- (c) One (1) Fluid Impingement Technology attached to the Continuous Lamination Machine, identified as SV1-4, with a maximum capacity of gel coating 299.25 pounds of fiberglass reinforced plywood panels per hour, no particulate control equipment, no external exhaust.
- (d) One (1) gel coat storage tank, with a maximum capacity of 4,000 gallons.

(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 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

This facility shall use less than twenty-five (25) tons of VOC per 12 consecutive month period. This usage limit is required to limit the potential to emit of VOC to less than 250 tons per year for the entire source. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.2.2 VOC Emissions [326 IAC 8-1-6]

The VOCs input to the gel coater shall be limited to less than twenty-five (25) tons per year per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 8-1-6 (New Facilities; general reduction requirements) not applicable.

D.2.3 Particulate Matter (PM) [326 IAC 6-3-2(a)]

The PM from the Fluid Impingement Technology shall not exceed the pound per hour emission rate established is E in the following formula:

Interpolation and extrapolation of the data for the process weight up to sixty thousand (60,000) pounds per hour shall be accompanied 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.2.4 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 this facility and any control devices.

Compliance Determination Requirements

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the VOC limit specified in Condition D.2.1 and D.2.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.6 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Conditions D.2.1 and D.2.2 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, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.2.7 VOC Emissions

Compliance with Conditions D.2.1 and D.2.2 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the most recent (12) month period.

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

D.2.8 Record Keeping Requirements

- (a) To document compliance with Conditions D.2.1 and D.2.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.2.1 and D.2.2.
- (1) The amount and VOC content of each coating material and solvent 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 cleanup solvent usage for each month;
 - (4) The total VOC usage for each month; and
 - (5) The weight of VOCs emitted for each compliance period.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.9 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.1 and D.2.2 shall be submitted to the addresses 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.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR MANAGEMENT COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Tower Structural Laminating Inc.
Source Address: 1491 Gerber Street, Ligonier, Indiana 46767
Mailing Address: P.O. Box 463, Goshen, Indiana 46526
Part 70 Permit No.: T113-7113-00049
Facility: Fluid Impingement Technology for gel coating (SV1-4)
Parameter: VOC
Limit: Less than 25 tons per year

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: _____

A certification is not required for this report.

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Part 70 Significant Source Modification.

Source Background and Description

Source Name:	Tower Structural Laminating, Inc.
Source Location:	1491 Gerber Street, Ligonier, Indiana 46767
County:	Noble
SIC Code:	3089
Operation Permit No.:	T 113-7113-00049
Operation Permit Issuance Date:	April 18, 2000
Significant Source Modification No.:	T 113-12529-00049
Permit Reviewer:	ERG/RGO

The Office of Air Management (OAM) has reviewed a modification application from Tower Structural Laminating, Inc., relating to the construction of the following emission units and pollution control devices:

- (a) One (1) Fluid Impingement Technology attached to the Continuous Lamination Machine, identified as SV1-4, with a maximum capacity of gel coating 299.25 pounds of fiberglass reinforced plywood panels per hour, no particulate control equipment no external exhaust.
- (b) One (1) gel coat storage tank, with a maximum capacity of 4,000 gallons.

History

On January 7, 1998, Tower Structural Laminating, Inc., submitted an application to the OAM requesting to add a Fluid Impingement Technology gel coater and bulk storage tank for storing gel coat. Tower Structural Laminating, Inc., was issued a Part 70 permit on April 18, 2000.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source 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 August 4, 2000. Additional information was received on August 18, 2000; August 31, 2000; and September 15, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (1 page).

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.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	N/A
PM-10	N/A
SO ₂	N/A
VOC	176.87
CO	N/A
NO _x	N/A

HAP's	Potential To Emit (tons/year)
Styrene	137.55
Methyl Methacrylate	39.32
TOTAL	176.87

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4)(D) and 326 IAC 2-7-10.5(f)(6) as the modification has a potential to emit greater than twenty-five (25) tons per year of VOC, greater than ten (10) tons per year of a single HAP, and greater than twenty-five (25) tons per year of a combination of HAPs.

County Attainment Status

The source is located in Noble County.

Pollutant	Status
PM-10	Attainment
SO ₂	Attainment
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Noble County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

- (b) Noble County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset 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	51.2
PM-10	51.2
SO ₂	N/A
VOC	<250
CO	0.7
NO _x	3.3

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the TSD for Operating Permit No. T113-7113-00049.

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 ₂	VOC	CO	NO _x	HAPs
Fluid Impingement Technology				<25			
Continuous Lamination and chop machine				<220			
Entire source				<250			

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

- (a) The storage tank is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110, Subpart K, Ka, Kb). The storage tank does not have a capacity greater than or equal to 40 m³ and does not store petroleum liquids.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1 (New Source Toxics Control)

This source was constructed before June 29, 1998 and a complete process line is not being built. Therefore, the requirements of 326 IAC 2-4.1 are not applicable.

326 IAC 8-1-6 (New Facilities)

Although the VOC PTE emissions are greater than twenty-five (25) tons per year from gel coating, the source has agreed to limit its VOC emissions to less than twenty-five (25) tons per year. Therefore, 326 IAC 8-1-6 does not apply.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the Fluid Impingement Technology 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:

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

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, OAM, 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.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. T 113-12529-00049.

Appendix A: Emissions Calculations

Gel Coating Operations from a Flow Coater - Open Molding of Composites (SV1-4)

Company Nan Tower Structural Laminating Inc.

Address City | 1491 Gerber Street, Ligonier, IN 46767

CP: T113-12529-00049

Plt ID: T113-12529-00049

Reviewer: ERG/RGo

Date: 09/27/00

Gel Coat Rate = 299.25 pounds per hour
 Hours of Operation in a day 24 hours in a day
 Days of Operation in a year 365 days in a year
 Amount of Gel Coat applied 1310.72 tons per year

Material	Weight % VOC	Weight % Methyl Methacrylate	Weight % Styrene	Methyl Methacrylate Emission Factor (lb/ton)	Styrene Emission Factor (lb/ton)	Potential Methyl Methacrylate tons per year	Potential Styrene tons per year	Total Potential HAP tons per year	Total Potential VOC tons per year
Lilly Gel Kotes	36.29%	4.00%	32.29%	60.00	209.88	39.32	137.55	176.87	176.87

Worst Gel Coat = Potential to Emit **39.32 137.55 176.87 176.87**

Emission Factors are taken from: Haberli Technical Discussion of the Unified Emission Factors for Open Molding of Composites Engineering Environmental Consulting Services Report, pg. 20. April 7, 1999. (Internet address: <http://www.cfa-hq.org/ueftext.pdf>)

Methodology

Potential to Emit Emissions (tons/year) = (Amount of Gel Coat applied) * (Emission Factor) * (8760 hours per year) / (2000 pounds per ton)

Styrene Emission Factor in lb/ton, for styrene content less than 51% = (0.325 * %styrene * 2000/100)

Styrene Emission Factor in lb/ton, for styrene content greater than 50% = (0.73 * ((1.03646 * %styrene) - 0.195) * 2000/100)

Methyl Methacrylate (MMA) Emission Factor in lb/ton = (15 * %MMA)

VOC Emissions (tons/year) = (Amount of Gel Coat applied)*(weight% non-HAP) + HAP emissions [Note: This assumes that all the volatile non-HAP and only part of the volatile HAP is emitted.]