Mr. Jay Cox
DMI Furniture, Inc.
703 N. Chestnut Street
P.O. Box 129
Huntingburg, IN 47542

Re: 037-11491
First Minor Source Modification to
Part 70 No.: T 037-5992-00058

Dear Mr. Cox:

DMI Furniture, Inc. was issued Part 70 operating permit T037-5992-00058 on January 25, 1999, for a stationary wood bedroom furniture manufacturing plant. An application to modify the source was received on October 25, 1999. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

One (1) surface coating booth, identified as 12A5, with a maximum capacity of 21.5 pounds of coating per hour, using dry filters as control, and exhausting to stack #12A5.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. 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(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.

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. The source must comply with the requirements of 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12 before operation of any of the proposed emission units can begin.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Rachel Meredith, OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (800) 451-6027, press 0 and ask for Rachel Meredith or extension 3-5691, or dial (317) 233-5691.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
RLM
cc: File - Dubois County
U.S. EPA, Region V
Southwest Regional Office
Dubois County Health Department
Air Compliance Section Inspector - Gene Kelso
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Minor Source Modification to a Part 70 Operating Permit

Source Background and Description

Source Name:	DMI Furniture, Inc. Plant #12
Source Location:	#12 DMI Lane, Huntingburg, Indiana 47542
County:	Dubois
SIC Code:	2511
Operation Permit No.:	T037-5992-00058
Source Modification:	037-11491-00058
Modification Reviewer:	Rachel Meredith

The Office of Air Management (OAM) has reviewed an application for a minor source modification to a Part 70 permit from DMI Furniture, Inc., Plant #12. The application by DMI Furniture seeks to add an additional spray coating booth to their existing surface coating operations. The facility description for the new surface coating booth is as follows:

(a) One (1) surface coating booth, identified as 12A5, with a maximum capacity of 21.5 pounds of coating per hour, using dry filters as control, and exhausting to stack #12A5.

Existing Approvals

The source was issued a Part 70 Operating Permit, No. 037-5992-00058, on January 25, 1999. No further approvals have been issued for this source since issuance of the Part 70 Operating Permit.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the First Minor Source Modification to the Part 70 Operating Permit 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 administratively complete Part 70 minor source modification application for the purposes of this review was received on October 25, 1999.

County Attainment Status

The source is located in Dubois County.

Pollutant	Status
PM	Attainment
PM-10	Attainment
SO_2	Attainment
NO_x	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. Dubois County has been designated as attainment or unclassifiable for ozone.

Potential To Emit

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 Emissions (tons/year)
PM	14.15
PM-10	14.15
SO_2	0.0
VOC	37.73
CO	0.0
NO_x	0.0

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential Emissions (tons/year)
Total HAPs	0.0

Justification for Modification

The addition of the new surface coating booth to the existing operation is being made through a Minor Source Modification pursuant to 326 IAC 2-7-10.5(d)(9), "[a] modification that has a potential to emit greater than the thresholds under 326 IAC 2-7-10.4(d)(4) that adds an emission units or units of the same type that are already permitted and that will comply with the same applicable requirements and permit terms and conditions as the existing emission unit or units except if the modification would result in a potential to emit greater than the thresholds in 326 IAC 2-2 or 326 IAC 2-3."

Because DMI Furniture, Inc. is located in Dubois County, which has been classified as attainment, the requirements of 326 IAC 2-2 are applicable to this source. However, the potential to emit from the proposed modification, 37.73 tons per year of VOCs and 14.15 tons per year of PM, fall below the thresholds in 326 IAC 2-2.

DMI Furniture, Inc. currently has eleven (11) surface coating booths, designated as units 12B1, 12B2, 12BA4, 12A1, 12A2, 12F1, 12F2, 12F3, 12F5, 12F7, and 12F8, of the same type as the proposed surface coating booth, designated as unit 12A5, permitted in their existing Part 70 Operating Permit, T037-5992-00058. Unit 12A5 will comply with the same applicable requirements, permit terms, and conditions as the existing emission units permitted under T037-5992-00058.

This Minor Source Modification only allows DMI Furniture, Inc. to construct the new spray coating booth. Significant Permit Modification No. 037-11538-00058 will allow the source to operate the new spray coating booth.

Source Status

DMI Furniture, Inc.'s potential to emit PM-10, and VOC is equal to or greater than 100 tons per year, the potential to emit a single HAP is equal to or greater than 10 tons per year, and the potential to emit a combination of HAPs is equal to or greater than 25 tons per year. Therefore, this source is considered a Major Source under 326 IAC 2-7. Although the potential to emit VOC is greater than 250 tons per year, the source is a Minor Source for PSD based on a Minor PSD limit of 249 tons per year of VOCs. The following table reflects DMI's existing potential to emit before modification.

Pollutant	Potential Emissions (tons/year)
PM	greater than 100, less than 250
PM-10	greater than 100, less than 250
SO_2	less than 100
VOC	limited to less than 250
CO	less than 100
NO_x	less than 100

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential Emissions (tons/year)
Xylene	greater than 10
Toluene	greater than 10
Hexone	greater than 10
2-Butanone	greater than 10
Methanol	greater than 10
Ethylbenzene	greater than 10
TOTAL	greater than 25

Limited PTE

The new surface coating booth will utilize a dry filter system with an anticipated control efficiency of 98%. The limited potential to emit based on the use of this control equipment is reflected in the following table.

Pollutant	Limited PTE (tons/year)
PM	0.28
PM-10	0.28
SO_2	0.0

VOC	37.73
CO	0.0
NO_x	0.0

See Appendix A for detailed emissions calculations.

Federal Rule Applicability

40 CFR 63, Subpart JJ

The new spray coating booth will be a part of the source's wood furniture coating operation and therefore subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 20-14, (40 CFR 63, Subpart JJ).

(a) Pursuant to 40 CFR 63, Subpart JJ, the wood furniture coating operations shall comply with the following conditions:

(1) Limit the volatile hazardous air pollutant (VHAP) emissions from finishing operations as follows:

(A) Achieve a weighted average VHAP content across all coatings of 1.0 pound VHAP per pound solids; or

(B) Use compliant finishing materials in which all stains, washcoats, sealers, topcoats, basecoats and enamels have a maximum VHAP content of 1.0 pound VHAP per pound solid, as applied. Thinners used for on-site formulation of washcoats, basecoats, and enamels have a 3.0 percent maximum VHAP content by weight. All other thinners have a 10.0 percent maximum VHAP content by weight; ; or

(C) Use a control device to limit emissions; or

(D) Use a combination of (A), (B), and (C).

(2) Limit the VHAP emissions contact adhesives as follows:

(A) For foam adhesives used in products that meet the upholstered seating flammability requirements, the VHAP content shall not exceed 1.8 pounds VHAP per pound solids;

(B) For all other contact adhesives (except aerosols and contact adhesives applied to nonporous substrates) the VHAP content shall not exceed 1.0 pound VHAP per pound solid; or

(C) Use a control device to limit emissions.

(3) The strippable spray booth material shall have a maximum VOC content of 0.8 pounds VOC per pound solids.

(4) The source shall complete a work practice implementation plan within sixty (60) calendar days after the source's compliance date as specified in 40 CFR 63.803. The plan must detail how the source will incorporate environmentally desirable practices into the operation.

(5) A semi-annual summary report shall be prepared and submitted to IDEM, OAM, and EPA Region V, to document the ongoing compliance status of the wood furniture coating operations.

State Rule Applicability

326 IAC 2-2 (Prevention of Significant Deterioration)

The new spray coating booth will be included under the PSD Minor limit of 249 tons per year together with the existing 19 spray coating units. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21 will not apply.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

Pursuant to 326 IAC 8-2-12, the surface coating applied to wood furniture shall utilize one of the following application:

Airless Spray Application
Air Assisted Airless Spray Application
Electrostatic Spray Application
Electrostatic Bell or Disc Application
Heated Airless Spray Application
Roller Coating
Brush or Wipe Application
Dip-and Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pound 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.

HVLP is the application method for the new spray boating booth. Therefore the new spray coating booth is in compliance with this rule.

Compliance Requirements

There are no changes in compliance requirements from the Part 70 Operating Permit.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

(a) This source will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the 1990 Clean Air Act Amendments.

Conclusion

The construction of the spray coating booth shall be subject to the conditions of the attached proposed **First Minor Source Modification No. 037-11491-00058.**

Appendix A: Emissions Calculations
VOC and Particulate from Proposed Unit A5 (Worst Case)

Company Name: DMI Furniture, Inc.
Address City IN Zip: #12 DMI Lane, Huntingburg, IN 47542
Modification No: 037-11491
Plt ID: 037-00058
Reviewer: Rachel Meredith
Date: October 27, 1999

Material	Density (Lb/Gal)	Weight % Volatile (H20& Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential ton/yr	lb VOC /gal solids	Transfer Efficiency
541R55	6.73	40.00%	0.000%	40.0%	0.000%	60.00%	3.20000	1.000	2.69	2.69	8.61	206.75	37.73	14.15	4.49	75%
Total Emissions After Control (Unit A5 will have a dry filter for PM control - control efficiency 98%)													37.73	0.28		

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used