

Mr. Richard Farr  
Aristokraft – Plant 2 and Decora Plant 3A  
One MasterBrand Cabinets Drive  
P.O. Box 420  
Jasper, Indiana 47547-0420

Re: 037-12868  
Minor Source Modification to:  
Part 70 permit No.: T037-5929-00015

Dear Mr. Farr:

Aristokraft – Plant 2 and Decora Plant 3A was issued Part 70 operating permit T037-5929-00015 on November 15, 2000 for a stationary wood furniture manufacturing operation. An application to modify the source was received on October 17, 2000. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

One (1) parts booth, identified as PB14, using high volume low pressure (HVLP) spray guns, with a maximum capacity of 30 parts per hour, and with emissions controlled by dry filters and exhausting to stacks P1 and P2.

In addition, the source will be installing additional capacity to the existing woodworking operations, identified as MC14. A new baghouse, with stack number C1, will be added to control particulate matter emissions. Since the woodworking operations have been classified as insignificant activities pursuant to 326 IAC 2-7-1(21)(G)(xxx), the additional capacity is considered insignificant. Therefore, one (1) baghouse with a maximum capacity of 30,000 acfm and 0.01 gr/dscf, exhausting to stack C1, located in Plant #2.

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 following construction conditions are applicable to the proposed project:

1. Volatile Organic Compounds (VOC) [326 IAC 8-2-12]  
Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), sealer touch-up booth (SB8) and parts booth (PB14) surface coating applied to wood furniture and cabinets shall utilize one of the following application methods:

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) 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.

2. Particulate Rules: Particulate Emissions Limitations
  - (a) Pursuant to 326 IAC 6-1-2, the particulate matter (PM) from the following spray booths shall be limited to 0.03 grain per dry standard cubic foot (dscf):
    - (1) Two (2) electrostatic disc sealer booths, constructed in March 1986, identified as SB6 and SB7;
    - (2) Two (2) electrostatic disc stain booths, constructed in March 1986, identified as STB2 and STB3;
    - (3) Two (2) electrostatic disc topcoat booths, constructed in March 1986, identified as TCB10 and TCB11;
    - (4) One (1) toner booth, constructed in March 1986, identified as TB1;
    - (5) One (1) sealer touch-up booth, constructed in May 1993, identified as SB8;
    - (6) One (1) topcoat touch-up booth, constructed in March 1986, identified as TCB12;
    - (7) One (1) parts booth, constructed in 1986, identified as PB13;
    - (8) One (1) parts booth, identified as PB14.
  - (b) Any change or modification which may increase the potential to emit of 250 tons per year or more of PM must be approved by the Office of Air Management before any such change may occur.

3. Prevention of Significant Deterioration (PSD) [326 IAC 2-2] [40 CFR 52.21]  
All surface coating operations shall be limited to less than 250 tons of VOC, including coatings, dilution solvents, and cleaning solvents, per 12 consecutive month period. This limit is required to limit the potential to emit of VOC to less than 250 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

The proposed operating conditions applicable to the parts booth (PB14) 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. If you have any questions on this matter call (800) 451-6027, press 0 and ask for extension (3-8396), or dial (317) 233-8396.

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Management

Attachments

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cc: File - Dubois County  
U.S. EPA, Region V  
Dubois County Health Department  
Southwest Regional Office  
Air Compliance Section Inspector – Ray Schick  
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 Part 70 Minor Source Modification.

### Source Background and Description

<b>Source Name:</b>	Aristokraft Plant 2 and Decora Plant 3A
<b>Source Location:</b>	One MasterBrand Cabinets Drive, Jasper, Indiana 47547
<b>County:</b>	Dubois
<b>SIC Code:</b>	2434, 2517
<b>Operation Permit No.:</b>	T037-5929-00015
<b>Operation Permit Issuance Date:</b>	November 15, 2000
<b>Minor Source Modification No.:</b>	037-12868-00015
<b>Permit Reviewer:</b>	Kimberly Titzer

The Office of Air Management (OAM) has reviewed a modification application from Aristokraft Plant 2 and Decora Plant 3A relating to the construction of the following emission units and pollution control devices:

One (1) parts booth, identified as PB14, using high volume low pressure (HVLP) spray guns, with a maximum capacity of 30 parts per hour, and with emissions controlled by dry filters and exhausting to stacks P1 and P2.

One (1) baghouse with a maximum capacity of 30,000 acfm and 0.01 gr/dscf, exhausting to stack C1, located in Plant #2.

### History

On October 17, 2000, Aristokraft Plant 2 and Decora Plant 3A submitted an application to the OAM requesting to add an additional surface coating booth to their existing plant and to add additional capacity to their woodworking operations, which will be considered insignificant. Aristokraft Plant 2 and Decora Plant 3A was issued a Part 70 permit on November 15, 2000.

### Enforcement Issue

There are no enforcement actions pending.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (inches)	Flow Rate (acfm)	Temperature (°F)
PB1	Parts booth PB14	*	30	*	ambient
PB2	Parts booth PB14	*	24	*	ambient

\* Information not provided

### Recommendation

The staff recommends to the Commissioner that the Part 70 Minor 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 October 17, 2000.

**Emission Calculations**

See Appendix A of this document for detailed emissions calculations.

**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	8.64
PM-10	8.64
SO <sub>2</sub>	0
VOC	23.24
CO	0
NO <sub>x</sub>	0

  

HAP-s	Potential To Emit (tons/year)
TOTAL	No HAPs

**Justification for Modification**

The Part 70 Operating permit is being modified through a Part 70 Minor Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(d), based on VOC and PM10 emissions less than twenty-five (25) tons per year. This approval is to construct only.

**County Attainment Status**

The source is located in Dubois County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Dubois County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

- (b) Dubois County has been classified as attainment or unclassifiable for all 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.
- (c) Fugitive Emissions  
 Since this type of operation is not 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 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	<250
PM-10	<250
SO <sub>2</sub>	N/A
VOC	<250
CO	N/A
NO <sub>x</sub>	N/A

This existing source is a minor stationary source because an attainment regulated pollutant is limited to less than 250 tons per year.

**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
Parts Booth PB14	(6-1-2) 0.03 gr/dscf	--	--	Potential emissions 23.24	--	--	--
TOTAL				<250			

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels, since the parts booth emits less than 40 tons per year and will be combined under the total source PSD Minor Limit of less than 250 tons per year. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (326 IAC 12) (40 CFR 60) applicable to this source.
- (b) The parts booths PB14 is not subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 14, (40 CFR 60, Subpart JJ), since there are no HAP emissions from this unit.

### State Rule Applicability – Parts Booth, PB14

#### 326 IAC 2-2 (PSD)

All surface coating operations shall be limited to less than 250 tons of VOC, including coatings, dilution solvents, and cleaning solvents, per 12 consecutive month period. This limit is required to limit the potential to emit of VOC to less than 250 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

#### 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 this 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%) opacity 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.

#### 326 IAC 6-1-2 (Particulate Rules: Particulate Emissions Limitations)

The particulate matter (PM) from the parts booth PB14 shall be limited to 0.03 grain per dry standard cubic foot (dscf).

Compliance is shown by the use of dry filters as control.

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

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), parts booth PB14 surface coating applied to wood furniture and cabinets shall utilize one of the following application methods:

- 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) 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.

The spray booth is in compliance because accepted methods of applications are used.

## 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.

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

- (A) The dry filters used as overspray control for the parts booth (PB14) have applicable compliance monitoring conditions as specified below:
  - (1) Monitoring
    - (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 surface coating booth stacks while the booths 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 this permit.
    - (b) Monthly inspections shall be performed of the coating 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 this permit.
    - (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

## Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 037-12868-00015.



**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations**

**Company Name:** Aristokraft - Plants #2 and Decora #3A  
**Address City IN Zip:** One MasterBrand Cabinets Drive, P.O. Box 420, Jasper, Indiana 47547-0420  
**Source Mod #:** 037-12868  
**Pit ID:** 037-00015  
**Reviewer:** Kimberly Titzer  
**Date:** November 2000

Material	Density (Lb/Gal)	Weight % Volatile (H2O& 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
WB Spice Molding Stain	8.4	69.64%	0.0%	69.6%	0.0%	0.00%	0.01563	30.000	5.85	5.85	2.74	65.81	12.01	4.71	0.00	10%
Sheen Conventional Self Seal	7.6	72.00%	0.0%	72.0%	0.0%	0.00%	0.01563	30.000	5.47	5.47	2.57	61.56	11.23	3.93	0.00	10%

**State Potential Emissions**

**Add worst case coating to all solvents**

**5.31**

**127.37**

**23.24**

**8.64**

**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

