



## DEPARTMENT OF NATURAL RESOURCES

## MISSOURI AIR CONSERVATION COMMISSION

## PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 022010-003 Project Number: 2009-09-003

Parent Company: Craftsmen Industries, Inc.

Parent Company Address: 3101 Elm Point Industrial Drive, St. Charles, MO 63301

Installation Name: Craftsmen Industries, Inc.

Installation Number: 183-0189

Installation Address: 3101 Elm Point Industrial Drive, St. Charles, MO 63301

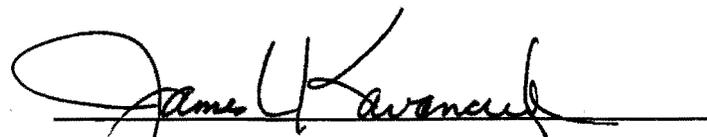
Location Information: St. Charles County, S24, T47N, R4E

Application for Authority to Construct was made for:  
a new paint booth. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

- Standard Conditions (on reverse) are applicable to this permit.
- Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

FEB - 8 2010

EFFECTIVE DATE

  
DIRECTOR OR DESIGNEE  
DEPARTMENT OF NATURAL RESOURCES

## STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

**You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review.** In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Departments' Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

*The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."*

Craftsmen Industries, Inc.  
St. Charles County, S24, T47N, R4E

1. **Superseding Condition**  
The conditions of this permit supersede all special conditions found in the previously issued construction permits 022000-002 and 022000-002A issued by the Air Pollution Control Program.
2. **Emission Limitation**
  - A. Craftsmen Industries, Inc. shall emit less than 40.0 tons of Volatile Organic Compounds (VOCs) in any consecutive 12-month period from the entire installation as defined in Table 1.
  - B. Craftsmen Industries, Inc. shall emit less than the respective individual Screening Model Action Level (SMAL) and twenty-five (25.0) tons combined of Hazardous Air Pollutants (HAPs) in any consecutive 12-month period from the entire installation as defined in Table 1. Individual SMAL are listed in Attachment AA "Air Pollution Control Program Table of Hazardous Air Pollutants and Screening Model Action Levels".
  - C. Craftsmen Industries, Inc. shall emit less than 15.0 tons per year of particulate matter less than 10 microns in aerodynamic diameter (PM<sub>10</sub>) in any consecutive 12-month period from the entire installation as defined in Table 1.
  - D. Craftsmen Industries, Inc. shall use electronic forms supplied by Dupont Performance Coatings, which are approved by the Air Pollution Control Program, to demonstrate compliance with Special Conditions 2.A, 2.B. Attachments A and B shall be used to demonstrate compliance with Special Condition 2.C. Craftsmen Industries, Inc. shall submit an applicability determination request to the Air Pollution Control Program and wait for a determination to be made before changing the coating supplier.

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**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

3. **Operational Requirement**  
Craftsmen Industries, Inc. shall keep the surface coatings, adhesives, solvents, and cleaning solutions in sealed containers whenever the materials are not in use. Craftsmen Industries, Inc. shall provide and maintain suitable, easily read, permanent markings on all solvent and cleaning solution containers used with this equipment.
4. **Record Keeping and Reporting Requirements**
  - A. Craftsmen Industries, Inc. shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include Material Safety Data Sheets (MSDS) for all materials used.
  - B. Craftsmen Industries, Inc. shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (5) REVIEW

Project Number: 2009-09-003  
Installation ID Number: 183-0189  
Permit Number:

Craftsmen Industries, Inc.  
3101 Elm Point Industrial Drive  
St. Charles, MO 63301

Complete: September 9, 2009

Parent Company:  
Craftsmen Industries, Inc.  
3101 Elm Point Industrial Drive  
St. Charles, MO 63301

St. Charles County, S24, T47N, R4E

REVIEW SUMMARY

- Craftsmen Industries, Inc. has applied for authority to construct a new paint booth.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process vary with the coating but can include are ethylbenzene, MIBK, toluene, zinc chromate, and xylene.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation. The Maximum Achievable Control Technology (MACT) Subpart HHHHHH (6H) "Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources" applies to the installation, with a compliance date of January 10, 2011.
- No air pollution control equipment is being used in association with the new equipment. The exhaust hood filter is a protective device for the equipment, not a pollution control device.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, "Construction Permits Required" and 10 CSR 10-5.330 "Control of Emissions From Industrial Surface Coating Operations". Potential emissions of VOC are conditioned below de minimis levels. Potential emissions of individual HAPs are conditioned below their respective SMAL. Potential emissions of combined HAPs are conditioned below the de minimis level. Potential emissions of PM<sub>10</sub> are conditioned below the de minimis level.
- This installation is located in St. Charles County, a nonattainment area for the 8-hour ozone standard and an attainment area for all other criteria pollutants.

- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.
- Ambient air quality modeling was not performed since potential emissions of the application are limited below de minimis levels.
- Emissions testing is not required for the equipment.
- A Basic Operating Permit application is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

Craftsmen Industries Inc. is an existing synthetic de minimis source under construction permitting, herein referred to as Craftsmen. Craftsmen operates a custom fabrication and top-coating shop that produces automotive graphics and special purpose, promotional display items. Craftsmen Industries Inc. of 3101 Elm Point Industrial Drive, St. Charles, Missouri, has not been considered the same installation for permitting purposes as Craftsmen Transportation Services, LLC of 3800 West Clay Street, St. Charles, Missouri.

**Table 1: Craftsmen Industries, Inc. Installation Defined**

Emission Designation	Description	Maximum Hourly Design Rate (MHDR)	MHDR Units
EU-01	Paint Booth A	<sup>2</sup> 42.5	Pounds paint/hour
EU-01a	Paint Booth A Heater	1.10	Million Cubic Feet/hour
EU-02	Paint Booth B	<sup>2</sup> 42.5	Pounds paint/hour
EU-02a	Paint Booth B Heater	0.62	Million Cubic Feet/hour
EU-03	Evaporation	Not Determined	Not Determined
<sup>1</sup> EU-04	Paint Booth C	4.76	Gallons paint/hour

<sup>1</sup> New emission source for this permit.

<sup>2</sup> Two spray guns summed to 42.5 pounds of paint per hour (one gun per booth). Individual rates are unknown.

The following permits have been issued to Craftsmen Industries, Inc. from the Air Pollution Control Program.

**Table 2: Permit History**

Permit Number	Description
022000-002	Construction permit: 2 paint booths
022000-002A	Construction amendment to exempt from 10 CSR 10-5.330 "Control of Emissions From Industrial Surface Coating Operations"

## PROJECT DESCRIPTION

Craftsmen is installing a paint booth (EU-04). Polyurethane foam blocks will be hand shaped, adhered together, epoxy coated, primed, and top-coated. Some foam pieces may be custom molded, rather than shaped from blocks. Negligible PM<sub>10</sub> emissions are expected from hand shaping the foam. Table 3 lists the maximum hourly design rates for processes at the new paint booth.

**Table 3: Paint Booth MHDRs**

Process Description	Material Applied	MHDR	MHDR Units
Foam adhesive	3M Super 77	7.50	No. of 16.75 net oz cans/hour
Two part foam coat	Devcon Futura Styrothane 5321A	4.00	Pounds per minute
	Devcon Futura Styrothane 5321B	4.00	
Two part rubber mold coating	Brush On 50A	N/D	Applied by hand
	Brush On 50B		
	So Strong Tint		
Primer	Dupont Variprime 615S	4.76	Gallons/hour
	Dupont Variprime 616S	4.76	
Activator/reducer	Dupont ChromaOne 7095S	4.76	
Clearcoat	Dupont ChromaBase 7900S	4.76	
Binder/base	Dupont ChromaSystem 150K	4.76	
	Dupont ChromaSystem 7175S	4.76	
Clean-up	Acetone	N/D	

The MHDR of the two part foam coating spray gun is 8 pounds per minute. If the two parts are applied in equal amounts, then each part is applied at 4 pounds per minute. The rubber mold coating is applied by hand, and the MHDR was not determined since the materials do not contain HAPs or VOCs. The primer, activator, base, and clear-coat can be applied at a maximum rate of 300 milliliters per minute, equating to 4.76 gallons per hour. A small airbrush can apply detailed coating at one half ounce per minute. No space heater is being installed in the booth.

The paint booth will be equipped with an exhaust hood and filter. This review considered the filter not as a control device for emissions, but rather a protective device to keep materials from coating the exhaust fan and duct work. Therefore, no control efficiency for VOC, HAP, or PM<sub>10</sub> should be applied for usage of the filter. The weight percent solids from the MSDS supplied by the applicant were used to determine PM<sub>10</sub> emissions.

## EMISSIONS/CONTROLS EVALUATION

Existing Potential Emissions are cited from permit 022000-002. Existing Actual Emissions are cited from the 2008 EIQ. Unconditioned Potential Emissions of the Application represent the potential of the new paint booth, assuming continuous operation (8760 hours per year), without setup, drying, or other bottlenecks. The New Installation Conditioned Potential represents voluntary limits taken by Craftsmen. Table 4 provides an emissions summary for this project.

**Table 4: Emissions Summary (tons per year)**

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2008 EIQ)	Unconditioned Potential Emissions of the Application	New Installation Conditioned Potential
PM <sub>10</sub>	15.0	N/A	0.22	176.46	<15.0
SO <sub>x</sub>	40.0	N/A	0.0004	N/A	N/A
NO <sub>x</sub>	40.0	N/A	0.08	N/A	N/A
VOC	40.0	<40.0	9.96	1,245.81	<40.0
CO	100.0	N/A	0.034	N/A	N/A
Combined HAPs	25.0	<25.0	0.0000	206.02	<25.0
Ethylbenzene	<sup>1</sup> 10.0	N/D	N/D	16.43	<10.0
MDI	<sup>1</sup> 0.1	N/D	N/D	2.52E-03	N/A
MIBK	<sup>1</sup> 10.0	N/D	N/D	21.18	<10.0
Toluene	<sup>1</sup> 10.0	N/D	N/D	88.45	<10.0
Xylene	<sup>1</sup> 10.0	N/D	N/D	66.41	<10.0
Zinc Chromate	<sup>1</sup> 0.002	N/D	N/D	6.72	<0.002

N/A = Not Applicable; N/D = Not Determined

<sup>1</sup> Screening Model Action Level

As Craftsmen will be producing custom parts of varying sizes; therefore, varying amounts of chemicals will be needed, and the most conservative estimate of emissions was to use the MHDR of each process. Also, as each part will vary in setup and curing times, the most conservative estimate of emissions includes no bottlenecks. Emissions were estimated at all processes occurring simultaneously for 8,760 hours per year. All available HAPs and VOCs are considered emitted, except for MDI in the two part foam, which is mostly used or bound in the reaction. PM<sub>10</sub> emissions were calculated at all available solids considered emitted. Actual operating conditions will determine much lower emissions. Craftsmen desires to remain a synthetic de minimis source for VOC and HAP, and become a synthetic de minimis source for PM<sub>10</sub>.

10 CSR 10-5.330 "Control of Emissions From Industrial Surface Coating Operations" applies to the installation. The rule is not applicable to the surface coating of metal parts if the installation coats less than 35 vehicles per day, but is applicable to the coating of plastic parts at a limit of 3.5 pounds of VOC per gallon of coating.

40 CFR Part 63 MACT, Subpart HHHHHH (6H) applies to the installation as they are an existing area source which has spray applied a coating containing a target HAP of chromium compound (Dupont Variprime 615S). For an existing affected source, the compliance date is January 10, 2011. An exemption may be applied for as described in section 63.11170 of the rule.

## PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, "Construction Permits Required" and 10 CSR 10-5.330 "Control of Emissions From Industrial Surface Coating Operations". Potential emissions of VOC are conditioned below de minimis levels. Potential emissions of individual HAPs are conditioned below their respective SMAL. Potential emissions of combined HAPs are conditioned below the de minimis level. Potential emissions of PM<sub>10</sub> are conditioned below the de minimis level.

## APPLICABLE REQUIREMENTS

Craftsmen Industries, Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

### GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110. The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-5.160
- *Control of Emissions From Industrial Surface Coating Operations*, 10 CSR 10-5.330

### SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *Maximum Achievable Control Technology (MACT) Regulations*, 10 CSR 10-6.075, *National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources*, 40 CFR Part 63, Subpart HHHHHH

## STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

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David Little  
Environmental Engineer

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Date

### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated September 1, 2009, received September 2, 2009, designating Craftsmen Industries, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- St. Louis Regional Office Site Survey, dated September 21, 2009.
- *Table of Hazardous Air Pollutants, Screening Model Action Levels, and Risk Assessment Levels*. Revision 3. December 4, 2009. Missouri Department of Natural Resources Air Pollution Control Program.



