



## 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: **052010-006** Project Number: 2010-01-045  
Installation Number: 107-0029

Parent Company: S&K Industries, Inc.

Parent Company Address: P.O. Box 529, Lexington, MO 64067

Installation Name: S&K Industries, Inc.

Installation Address: 8th and Main Streets, Lexington, MO 64067

Location Information: Lafayette County, S33, T51N, R27W

Application for Authority to Construct was made for the construction and operation of a new wood trophy parts and plaque painting process. 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 Condition are applicable to this permit.

MAY 11 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 Condition 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."*

S&K Industries, Inc.  
Lafayette County, S33, T51N, R27W

1. Emission Limitations and Record Keeping
  - A. S&K Industries, Inc. shall emit less than 40.0 tons of Volatile Organic Compounds (VOCs) in any consecutive 12-month period from all paint booths.
  - B. Attachment A or an equivalent form, such as an electronic form, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 1.A.
  - C. S&K Industries, Inc. shall emit less than 10.0 tons of Xylene, less than 10.0 tons of Toluene and less than 10.0 tons of Ethylbenzene and less than 2.0 tons of Formaldehyde in any consecutive 12-month period.
  - D. S&K Industries, Inc. shall also emit less than twenty-five (25) tons of combined HAPs from all paint booths in any consecutive 12-month period.
  - E. Attachment B, Attachment C or an equivalent form, such as an electronic form, approved by the Air Pollution Control Program shall be used to demonstrate HAP compliance with Special Condition 1.C and Special Condition 1.D.
  - F. When considering using a new coating that is different to those listed in the Application for Authority to Construct, S&K Industries, Inc. must calculate the potential emissions for each individual Hazardous Air Pollutant (HAP) in the alternative coating. If the potential HAP emissions for the alternative solution are *less than* the SMAL, as listed in Attachment AA, then S&K Industries, Inc. does not need to obtain approval from the Air Pollution Control Program before the use of the alternative treatment solution. These calculations must be kept in accordance to Special Condition 4.A.

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### SPECIAL CONDITIONS:

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

- G. Attachment B, Attachment C or an equivalent form, such as an electronic form, approved by the Air Pollution Control Program shall be used to demonstrate HAP compliance with Special Condition 1.F. If the potential HAP emissions for the alternative paint are *equal to or greater than* the SMAL, then S&K Industries, Inc. must obtain approval from the Air Pollution Control Program before use of the alternative coating.
  - H. S&K Industries, Inc. shall emit less than 15.0 tons of particulate matter less than ten (10) microns in diameter (PM<sub>10</sub>) in any consecutive 12-month period from all paint booths.
  - I. Attachment D or an equivalent form, such as an electronic form, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 1.H.
2. Woodworking Equipment
- A. S&K Industries, Inc. is limited to use the following woodworking equipment:
    - 1) two buffing wheels,
    - 2) one jointer,
    - 3) one planer,
    - 4) one shaper,
    - 5) one table saw, and
    - 6) one upright spindle sander
    - 7) one manual milling machine
    - 8) one bandsaw
3. Control Device Requirement – Paper Filter
- A. S&K Industries, Inc. shall control PM<sub>10</sub> emissions from all paint booths (EP-1) using paper filters as specified in the permit application. The filter(s) shall be operated and maintained in accordance with the manufacturer's specifications.
  - B. Replacement paper filters for the paint booths shall be kept on hand at all times. The paper filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
  - C. S&K Industries, Inc. shall maintain an operating and maintenance log for the paper filters which shall include the following:

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**SPECIAL CONDITIONS:**

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

- 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
  - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
4. Record Keeping and Reporting Requirements
- A. S&K 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) and VOC Reports for all materials used.
  - B. S&K Industries, Inc. shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 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: 2010-01-045  
Installation ID Number: 107-0029  
Permit Number:

S&K Industries, Inc.  
8th and Main Streets  
Lexington, MO 64067

Complete: January 26, 2010

Parent Company:  
S&K Industries, Inc.  
P.O. Box 529  
Lexington, MO 64067

Lafayette County, S33, T51N, R27W

REVIEW SUMMARY

- S&K Industries, Inc. has applied for authority for the construction and operation of a new wood trophy parts and plaque painting process.
- HAPs of concern from this process include but are not limited to: Xylene (CAS # 1330-20-7), Toluene (CAS # 108-88-3), Ethylbenzene (CAS# 100-41-4), and Formaldehyde (CAS # 50-00-0).
- 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. None of the currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment. The following MACT regulations were evaluated but found inapplicable: 40 CFR Part 63 - Subpart JJ - National Emission Standards for Wood Furniture Manufacturing Operations, 40 CFR Part 63 - Subpart DDDD - National Emission Standard for Hazardous Air Pollutants: Plywood and Composite Wood Products, 40 CFR Part 63 - Subpart HHHHHH - National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources and 40 CFR Part 63 - Subpart CCCCCC - National Emission Standards for Hazardous Air Pollutants for Area Sources: Paints and Allied Products Manufacturing.
- Each paint booth is equipped with a paper filter to control the PM<sub>10</sub> emissions from the paint application equipment.
- Paper filters for each paint booth are being used to control the PM<sub>10</sub> associated with the paint booth's spray gun emissions.

- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are conditioned below de minimis levels.
- This installation is located in Lafayette County, an attainment area for all 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.
- No Operating Permit is required for this installation.
- Approval of this permit is recommended with Special Conditions.

### INSTALLATION DESCRIPTION

S&K Industries, Inc., located in the City of Lexington, Missouri in Lafayette County, previously housed a gunstock manufacturing facility and was permitted under Title V Permit # OP 2004-043. The operation was shut down in December 2008 and the Title V permit was allowed to expire. The installation now has a wood trophy parts and plaque painting process.

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

**Table 1: Permit History**

Permit Number	Description
1089-005	De Minimis permit issued to allow gunstock manufacturing and painting
OP2000-062	Part 70 OP
OP2004-043	Part 70 OP

### PROJECT DESCRIPTION

A new wood trophy parts and plaque painting process that consists of three spray booths with one spray gun per booth is being installed by S&K Industries, Inc. in the City of Lexington, Missouri in Lafayette County. All three paint guns and paint booths are collectively known as EP-1. Each gun is rated to spray up to 34 gallons per hour. Wooden prototypes are occasionally constructed using two buffing wheels, one jointer, one planer, one shaper, one table saw, and one upright spindle sander. The woodworking equipment is located inside the shop area.

## EMISSIONS/CONTROLS EVALUATION

For the woodworking equipment, PM<sub>10</sub> emissions were determined using emission factors from the Environmental Protection Agency document Factor Information Retrieval (FIRE) V6.24, *Source Classification Codes and Emission Factors Listing for Criteria Air Pollutants* (SCC # 3-07-008-02).

A mass balance approach was used to calculate the emissions from the paint booth operations using Material Safety Data Sheets (MSDSs) and VOC Reports from manufacture. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year.) Because paper filters are being used for each paint booth to control the PM<sub>10</sub> emissions, a 90.0% control efficiency was used. Because the transfer efficiency for high volume, low pressure spray guns are between the transfer efficiency of air-atomized spray guns and airless spray guns, a transfer efficiency for this application is assumed to be 50.0 %. The following table provides an emissions summary for this project.

**Table 2: Emissions Summary (tons per year)**

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM <sub>10</sub>	15.0	N/A	N/A	56.84	< 15.0
SO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
NO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	2,416.97	< 40.0
CO	100.0	N/A	N/A	N/A	N/A
TOTAL HAPs	25.0	N/A	N/A	712.35	< 25.0
XYLENE	10.0	N/A	N/A	355.17	< 10.0
TOLUENE	10.0	N/A	N/A	339.98	< 10.0
ETHYLBENZENE	10.0	N/A	N/A	177.59	< 10.0
FORMALDEHYDE	2.0	N/A	N/A	35.52	< 2.0

N/A = Not Applicable

### PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are conditioned below de minimis levels.

### APPLICABLE REQUIREMENTS

S&K 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.
- *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 10-3.090

## 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 Condition.

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Daronn Williams  
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 January 15, 2010, received January 21, 2010, designating S&K Industries, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Kansas City Regional Office Site Survey, dated April 8, 2010.
- VOC Reports from manufacture.
- Material Safety Data Sheets from manufacture.









Mr. Don Stout  
V.P. Operations  
S&K Industries, Inc.  
P.O. Box 529  
Lexington, MO 64067

RE: New Source Review Permit - Project Number: 2010-01-045

Dear Mr. Stout:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the Special Condition on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions and your new source review permit application is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Daronn Williams, at the Departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale  
New Source Review Unit Chief

KBH:dwl

Enclosures

c: Kansas City Regional Office  
PAMS File: 2010-01-045

Permit Number: