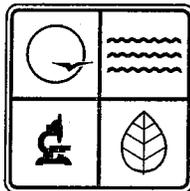


DEPARTMENT OF NATURAL RESOURCES

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: **032007 - 009** Project Number: **2006-06-041**

Owner: **Apple Cabinet Inc.**

Owner's Address: **623 W. Clinton, P.O. Box 241, Seymour, MO 65746**

Installation Name: **Apple Cabinet Inc.**

Installation Address: **623 W. Clinton, P.O. Box 241, Seymour, MO 65746**

Location Information: **Webster County, S3, T28, R17**

Application for Authority to Construct was made for:

Installation of a wood cabinet facility. This equipment was constructed prior to receipt of a New Source Review permit from the Air Pollution Control Program. Obtaining this permit is part of a remedial action required by the Air Pollution Control Program. 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 (listed as attachments starting on page 2) are applicable to this permit.

MAR 29 2007

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. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. 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 as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, 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 Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

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 Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

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Permit No.	
Project No.	2006-06-041

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."

Apple Cabinet Inc.
Webster County, S3, T28, R17

1. VOC and HAP Emission Limitation
 - A. Apple Cabinet Inc. shall emit less than 40 tons of Volatile Organic Compounds (VOCs) from the entire installation in any consecutive 12-month period.
 - B. Apple Cabinet Inc. shall emit less than ten (10) tons individually or twenty-five (25) tons combined of Hazardous Air Pollutants (HAPs) from the installation in any consecutive 12-month period.
 - C. Attachment A, Attachment B and Attachment C or equivalent forms approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 1.A and 1.B Apple Cabinet 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 at this installation.
 - D. Apple Cabinet Inc. shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 1.C indicate that the source exceeds the limitations of Special Conditions Number 1.A & 1.B.
2. Control Devices

Fabric filters in the woodworking area (EP01) and the high efficiency filter in the spray booth (EP02) must be in use at all times when the woodworking equipment and spray guns associated with these emission points are in operation. The filters shall be operated and maintained in accordance with the manufacturer's specifications.

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SPECIAL CONDITIONS:

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

3. **Solvent Cloths**
Apple Cabinet Inc. shall keep the solvents and cleaning solutions in sealed containers whenever the materials are not in use. Apple Cabinet Inc. shall provide and maintain suitable, easily read, permanent markings on all solvent and cleaning solution containers used with this equipment.

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

Project Number: 2006-06-041
Installation ID Number: 225-0041
Permit Number:

Apple Cabinet Inc.
623 W. Clinton, P.O. Box 241
Seymour, MO 65746

Complete: June 14, 2006
Reviewed: October 19, 2006

Parent Company:
Apple Cabinet Inc.
623 W. Clinton, P.O. Box 241
Seymour, MO 65746

Webster County, S3, T28, R17

REVIEW SUMMARY

- Apple Cabinet Inc. has applied for authority to manufacture wood cabinets. This equipment was constructed prior to receipt of a New Source Review permit from the Air Pollution Control Program. Obtaining this permit is part of a remedial action required by the Air Pollution Control Program.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are xylene, cumene, toluene, ethyl benzene, formaldehyde, and methanol.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- The Maximum Achievable Control Technology (MACT) standard, 40 CFR Part 63, Subpart JJ, *National Emission Standards for Wood Furniture Manufacturing Operations* does not apply since this facility is not a major source.
- Fabric filters in the woodworking area (EP01) and a high efficiency filter in the spray booth (EP02) are being used to control the particulate matter less than 10 microns in diameter (PM₁₀).
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of VOCs and HAPS are conditioned to below de minimis levels.
- This installation is located in Webster County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the source.
- No Operating Permit is required for this installation.
- Approval of this permit is recommended with special conditions.

INSTALLATION / PROJECT DESCRIPTION

Apple Cabinets Inc. located in Webster County is an existing wood cabinet manufacturer company in operation since 1996. However, no permits have been issued to Apple Cabinet Inc. from the Air Pollution Control Program. Apple Cabinets Inc. has applied for authority to operate a furniture restoration facility consisting of a woodcutting area (EP1) and spray booths (EP2) for the application of stain, sealer, and lacquer as well as an area for equipment cleanup (EP3).

The woodworking area consists of saws, sanders, and molding equipment. In addition, there are several other drilling machines, but emissions from these tools are assumed to be minimal. The maximum hourly design rate (MHDR) for all of the woodworking equipment is based on the amount of wood processed which was derived from the line speed of the equipment and typical board sizes. The combined MHDR for saws and molding-type equipment is equal to 112.9 tons of wood processed per hour. The combined MHDR for sander-type equipment is equal to 767 cubic feet of wood processed per hour. A dust collection system consisting of two fabric filters fed by three ventilation systems collects dust from the woodworking machines. There is potential for VOCs emissions in the woodworking area from the application of hot melt glue that is used with the edge banders. However, based on maximum historical usage, VOCs from the glue are estimated to be less than 0.05 tons per year. Therefore, VOC emissions from the woodworking area are viewed as insignificant.

The MHDR for the painting operation is based on estimated spraying times of the stain, sealer, and lacquer taking into account time needed for preparation, drying, and sanding. The estimated MHDRs for stain, sealer, and lacquer application are 3.1, 4.3, and 3.5 gallons per hour, respectively.

Thinner is used for thinning the coatings and cleaning of spray equipment. Apple Cabinets estimates the maximum historical usage of the thinner at approximately 75 gallon per month.

EMISSIONS/CONTROLS EVALUATION

The main air pollutants of concern for the facility are PM₁₀, VOCs, and HAPs. For the equipment in the woodworking area (EP1), PM₁₀ 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 and # 3-07-016-60). PM₁₀ emissions from all equipment is treated by one of two fabric filters. A capture efficiency of 90% and PM₁₀ control efficiency of 96.7% was used to determine the PM₁₀ emissions from the fabric filters.

The emissions determined for the spray booth (EP2) were estimated using information obtained from the Material Safety Data Sheets provided in the application for the stain, sealer, lacquer, and thinner. A mass balance approach was used and 100% of the VOC and HAP content of the coatings and thinner are assumed to be emitted into the atmosphere. PM₁₀ emissions for the spray booth were evaluated based on the solids content of the coating and the transfer efficiency from the spray gun (78%). If not specifically stated, the solids content of the material was conservatively estimated by taking the density of the paint and subtracting the VOC content and assuming the remainder to be all PM₁₀. PM₁₀ emissions are controlled through the use of a high efficiency filter having a minimum control efficiency of 90%.

Since this facility has not received any construction permits from the Air Pollution Control Program, existing potential emissions are included in the potential emissions of the application. Existing actual emissions were taken from the installation's 2005 Emission Inventory Questionnaire (EIQ). Potential emissions of the application represent the potential of the equipment for the entire installation, assuming continuous operation (8760 hours per year). The following table provides an emissions summary for this project.

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2005 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	N/A	N/A	14.6	N/A
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	9.2	286	<40
CO	100.0	N/A	N/A	N/A	N/A
HAPs	25.0	N/A	N/A	50.6	<25.0
Xylene	10.0	N/A	N/A	11.7	<10.0
Cumene	10.0	N/A	N/A	1.00	<10.0
Toluene	10.0	N/A	N/A	33.6	<10.0
Ethyl Benzene	10.0	N/A	N/A	3.57	<10.0
Formaldehyde	10.0	N/A	N/A	1.14	<10.0
Methanol	10.0	N/A	N/A	1.13	<10.0

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 VOCs and HAPs are conditioned to below de minimis levels.

APPLICABLE REQUIREMENTS

Apple Cabinet 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 April 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*

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes, 10 CSR 10-6.400*

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.

Susan Heckenkamp
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 18, 2006, received June 12, 2006, designating Apple Cabinet Inc. as the owner and operator of the installation.
- U.S. EPA document FIRE V6.24.
- Material Safety Data Sheets
- Southwest Regional Office Site Survey, dated July 3, 2006.

Mr. Tim Denson
President
Apple Cabinet Inc.
623 W. Clinton
P.O. Box 0241
Seymour, MO 65746

RE: New Source Review Permit - Project Number: 2006-06-041

Dear Mr. Denson:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, 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 me at (573) 751-4817, or you may write to me at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:shl

Enclosures

c: Southwest Regional Office
PAMS File 2006-06-041

Permit Number: