

STATE OF MISSOURI



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: **012010-012** Project Number: 2009-06-072

Parent Company: Ozark Shavings, LLC

Parent Company Address: P.O. Box 298, Licking, MO 65542

Installation Name: Ozark Shavings, LLC

Installation Number: 215-0075

Installation Address: 200 Staples Lane, Licking, MO 65542

Location Information: Texas County, S1, T32N, R9W

Application for Authority to Construct was made for:
Construction of an animal bedding production facility. 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.

JAN 25 2010

EFFECTIVE DATE

A handwritten signature in black ink, appearing to read "James L. Kavanaugh".

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.

Page No.	3
Permit No.	
Project No.	2009-06-072

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."

Ozark Shavings, LLC
Texas County, S1, T32N, R9W

1. Emission Limitation
 - A. Ozark Shavings, LLC shall emit less than 0.10 tons of acrolein in any consecutive 12-month period from the dry wood burner (EU-21).
 - B. Attachment A or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 1.A.
2. Control Device Requirement-Cyclone
 - A. Ozark Shavings, LLC shall control emissions from the dry wood burner (EU-21) using a cyclone as specified in the permit application.
 - B. The cyclone shall be operated and maintained in accordance with the manufacturer's specifications.
 - C. Ozark Shavings, LLC shall maintain an operating and maintenance log for the cyclone which shall include the following:
 - 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.
3. Control Device Requirement-Baghouse
 - A. Ozark Shavings, LLC shall control emissions from the following equipment using a baghouse as specified in the permit application.
 - 1.) Bedding Hopper (EU-24)
 - 2.) Bagger (EU-25)
 - B. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources' employees may easily observe them.

Page No.	4
Permit No.	
Project No.	2009-06-072

SPECIAL CONDITIONS:

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

- C. Ozark Shavings, LLC shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
 - D. Replacement filters for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
 - E. Ozark Shavings, LLC shall maintain an operating and maintenance log for the baghouses which shall include the following:
 - 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. Ozark Shavings, LLC 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.
 - B. Ozark Shavings, LLC 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: 2009-06-072
Installation ID Number: 215-0075
Permit Number:

Ozark Shavings, LLC
200 Staples Lane
Licking, MO 65542

Complete: June 24, 2009

Parent Company:
Ozark Shavings, LLC
P.O. Box 298
Licking, MO 65542

Texas County, S1, T32N, R9W

REVIEW SUMMARY

- Ozark Shavings, LLC has applied for authority to construct an animal bedding production facility.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. The HAP of concern from this process is acrolein.
- 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.
- A cyclone is being used to control the particulate matter less than 10 microns in diameter (PM₁₀) emissions from the dryer and a baghouse is being used to control PM₁₀ from the bagging operation in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of acrolein are conditioned below the screening model action level (SMAL).
- This installation is located in Texas 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.
- Ambient air quality modeling was performed to determine the ambient impact of acrolein.

- 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

Current River Pole Co., is an existing minor source of PM₁₀. The installation manufactures untreated utility poles. Pine logs are delivered to the mill site where they are put into dry storage. The logs are then processed through a de-barker that removes bark and wood, which results in a sized pole. The utility poles are once again placed into storage until shipped off-site. This installation received a “no construction permit required” letter from the Air Pollution Control Program for the above debarking process. The installation also operates a 400 horsepower (19 million British thermal units per hour) wood fired Hurst Boiler (Model No. HYB2700-150-3). The boiler is equipped with a cyclone to control particulate emissions. Current River Pole Co. also operates a waste wood grinder. The equipment permitted as part of this project is doing business as Ozark Shavings, LLC. Current River Pole Co. and Ozark Shavings, LLC are the same installation.

The following permits have been issued to Ozark Shavings, LLC from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
072005-044	400 hp wood-fired boiler
OP	Basic Operating Permit

PROJECT DESCRIPTION

Ozark Shavings, LLC has applied for authority to construct an animal bedding production line. Three cut-up saws (EU 13, EU-14 and EU-15) process whole logs at a combined rate of 13 tons per hour that are then processed in three shavers (EU-17, EU-18 and EU-19). The sawdust from this equipment is conveyed via a vibrating conveyer (EU-16) to a hopper (EU-20) and processed in a dryer (EU-21) fired by a 29 MMBtu/hr Webb burner. The dryer is controlled by a cyclone. Dried material is screened (EU-22) and undersized material is conveyed to a silo (EU-24) for fuel in the Webb burner. The remaining material is conveyed to a hopper (EU-26) and then bagged (EU-25) at a rate of 5.2 tons per hour. The hopper and bagger are controlled by a baghouse.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.6 “Wood Residue Combustion in Boilers,” September 2003 and the Factor Information Retrieval Database, Version 6.25. Emissions of the cut-up saws and shavers were calculated using the emission factor for SCC 3-07-008-02. Emissions of the sawdust handling systems were calculated using the emission factor for SCC 3-07-008-03. Emissions from the Webb burner were calculated using the emission factors in AP-42 Section 1.6. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8,760 hours per year.) The potential emissions of acrolein exceed the SMAL. The installation conducted a modeling analysis to demonstrate compliance with risk assessment level (RAL) for acrolein. To assure compliance with the RAL, the installation shall calculate the 12-month total emissions of acrolein and keep this total below 0.10 tons of acrolein per 12 month period. The acrolein emissions shall be calculated by multiplying the tons of wood combusted in the boiler by the average heat value (million British thermal units per ton of wood (MMBtu/ton)) and the appropriate emission factor. The heat value may be obtained by testing the sawdust in accordance with 10 CSR 10-6.040 *Reference Methods*, Section (2) or a default of 9 MMBtu/ton shall be used in the calculation. The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> and SMAL Levels	Existing Potential Emissions*	Existing Actual Emissions (2008 EIQ)	Potential Emissions of the Application	Project Conditioned Potential
PM ₁₀	15.0	50.47	1.68	70.7	13.9
SO _x	40.0	2.08	0.75	3.2	0.6
NO _x	40.0	18.31	6.60	62.2	12.2
VOC	40.0	3.25	0.51	2.2	0.4
CO	100.0	49.93	18.00	76.2	15.0
Acrolein	0.040**	N/D	N/D	0.508	< 0.10
Arsenic	0.0050**	N/D	N/D	0.0028	0.0006
Chlorine	0.10**	N/D	N/D	0.10	0.001
Lead	0.010**	N/D	N/D	0.006	0.001
Manganese	0.80**	N/D	N/D	0.20	0.04
Total HAPs	25.0	N/D	N/D	4.9	1.0

N/D = Not Determined

*Existing Potential Emissions taken from project 2008-09-058

**Screening Model Action Level (SMAL)

AIR QUALITY ANALYSIS

Acrolein emissions were modeled to demonstrate compliance with the RAL. Modeling was conducted using the EPA AERMOD modeling program. The modeling results show that the installation's emissions will not exceed the 24-hour or annual RALs of 6.9 $\mu\text{g}/\text{m}^3$ and 0.02 $\mu\text{g}/\text{m}^3$ respectively, if the installation limits the acrolein emissions from the dryer to 0.10 tons per year.

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 acrolein are conditioned below SMAL levels.

APPLICABLE REQUIREMENTS

Ozark Shavings, LLC 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. For a complete list of applicable requirements for your installation, please consult your operating permit.

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 10-3.090

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.

Michael Mittermeyer
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated June 23, 2009, received June 24, 2009, designating Ozark Shavings, LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southeast Regional Office Site Survey, dated June 30, 2009.
- Email Subject: Ozark Shavings, LLC, dated July 7, 2009, requesting company name be changed from Current River to Ozark Shavings, LLC
- Email Subject: RE: Ozark Shavings, LLC, dated September 22, 2009, detailing changes to the plant design.

Mr. Tony Parks
President
Ozark Shavings, LLC
P.O. Box 298
Licking, M
O 65542

RE: New Source Review Permit - Project Number: 2009-06-072

Dear Mr. Parks:

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, your new source review permit application and with your amended operating permit 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 Michael Mittermeyer at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:mmk

Enclosures

c: Southeast Regional Office
PAMS File: 2009-06-072