

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

PERMIT BOOK

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: **022015-010**

Project Number: 2014-12-006
Installation Number: 091-0072

Parent Company: TFP Holdings, LLC

Parent Company Address: 3772 Highway 160 West, West Plains, MO 65775

Installation Name: Timberland Forest Products

Installation Address: 3772 Highway 160 West, West Plains, MO 65775

Location Information: Howell County, S22, T23N, R9W

Application for Authority to Construct was made for:
The installation of a charcoal packaging facility at their existing location. 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 17 2015

EFFECTIVE DATE

Handwritten signature of Kyla L. Moore in black ink.

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 Department's Air Pollution Control Program of the anticipated date of startup of these air contaminant sources. 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 startup of these air contaminant sources.

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 sources(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."

Timberland Forest Products
Howell County, S22, T23N, R9W

1. Haul Road Watering
 - A. Timberland Forest Products shall water haul roads whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary.
 - B. Watering may be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.
2. Control Device Requirement-Baghouse
 - A. Timberland Forest Products shall control emissions from the following equipment using a baghouse as specified in the permit application:
 - 1) EP-23 Conveyor
 - 2) EP-24 Screen
 - 3) EP-25 Conveyor
 - 4) EP-26 Conveyor
 - 5) EP-27 Charcoal Bagging
 - 6) EP-28 Fines Conveyor
 - 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 Department of Natural Resources' employees may easily observe them.
 - C. Filters for the baghouse shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

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SPECIAL CONDITIONS:

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

- D. Timberland Forest Products shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours while the plant is operating. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer.
 - E. Timberland Forest Products shall maintain an operating and maintenance log for the baghouse 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. Record Keeping and Reporting Requirements
- A. Timberland Forest Products shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
 - B. Timberland Forest Products shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 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: 2014-12-006
Installation ID Number: 091-0072
Permit Number:

Timberland Forest Products
3772 Highway 160 West
West Plains, MO 65775

Complete: December 19, 2014

Parent Company:
TFP Holdings, LLC
3772 Highway 160 West
West Plains, MO 65775
Howell County, S22, T23N, R9W

REVIEW SUMMARY

- Timberland Forest Products has applied for authority to install a charcoal packaging facility at their existing location.
- HAP emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- A baghouse is being used to control particulate emissions from the equipment in this permit. Undocumented watering is being used to control particulate emissions from haul roads.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ are conditioned below de minimis levels.
- This installation is located in Howell County, an attainment area for all criteria pollutants.
- This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation is classified as number 25, *Charcoal Production Facilities*. The installation's major source level is 100 tons per year and fugitive emissions are counted toward major source applicability.
- Emissions testing is not required for the equipment.
- An application for an amendment to your Basic Operating Permit is required for this installation within 30 days of equipment startup.

- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Timberland Forest Products, located in West Plains, Missouri, produces pallets and rough lumber for market and pallet manufacturing. Timberland produces a broad selection of standard hardwood pallets and skids; sawmill products such as railroad ties, grade lumber, and flooring; and wood byproducts such as mulch, firewood, and hardwood lump charcoal. The charcoal is made in twelve charcoal kilns which can produce up to 1.6 tons of charcoal per hour overall.

The following New Source Review permits have been issued to Timberland Forest Products from the Air Pollution Control Program:

Table 1: Permit History

Permit Number	Description
032002-008	Installation of six charcoal kilns and one thermal oxidizer afterburner
072005-043	Installation of nine charcoal kilns and three thermal oxidizer afterburners
062012-005	Installation of six charcoal kilns and one thermal oxidizer afterburner
122014-001	Installation of a firewood kiln and sawdust burner

PROJECT DESCRIPTION

Timberland Forest Products is requesting authority to install and operate a charcoal packaging facility at their existing location. The equipment will include a hopper (EP-21), conveyors (EP-22, EP-23, EP-25, EP-26, and EP-28), a screening system (EP-24), and a bagging system (EP-27). The overall MHDR of the operation is 7.5 tons of raw charcoal per hour; however, because the existing plant can only produce charcoal at 1.6 tons per hour, the bagging operation is bottlenecked at this same rate. Due to the positioning of the new receiving hopper, a loader will travel approximately 200 feet to feed the hopper. Due to the positioning of the new loading docks, the haul road used to transport charcoal off-site will increase by 200 feet. The total throughput of charcoal at the facility will not increase.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition.

Particulate emissions from the conveying, screening, and bagging operations were calculated using emission factors obtained from the EPA's online emission factor database (WebFIRE). There are no emission factors for the processing of lump charcoal, so emission factors from similar operations (SCC 3-05-016-07 Raw Material Transfer/Conveying, SCC 3-05-011-07 Cement Loading, and SCC 3-05-025-11 Screening Sand/Gravel) were used. Since there were no emission factors listed for PM or PM_{2.5}, a particle size distribution was obtained from AP-42, Appendix B, Table B.2.2, Category 3. The particle size distribution for PM₁₀ is 51% of PM, and the particle size distribution for PM_{2.5} is 15% of PM.

Particulate emissions from the conveying, screening, and bagging operations are controlled by a baghouse. A capture efficiency of 95% was given to each piece of equipment EP-23 through EP-28 due to the use of canopy hoods over each emission point. The hoods draw in exhaust air using the negative pressure created by a 15hp motor. The control efficiency of the baghouse is 99%.

Emissions from the additional haul road distance and vehicular activity areas were calculated using the predictive equation from AP-42 Section 13.2.2 *Unpaved Roads*, November 2006. A 50% control efficiency for PM and PM₁₀, and a 40% control efficiency for PM_{2.5} were applied to the calculations to account for the use of undocumented watering.

The following table provides an emissions summary for this project. Existing potential emissions were taken from the previous construction permit 122014-001. Existing actual emissions were taken from the installation's 2013 EIQ. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8,760 hours per year). Controlled potential emissions account for applicable special conditions and control devices. The new installation conditioned potential reflects the total potential emissions of the entire installation, taking into consideration all applicable special condition limitations and control devices.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2013 EIQ)	Potential Emissions of the Application	Controlled Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	N/D	N/D	22.65	8.43	N/D
PM ₁₀	15.0	62.17	13.71	11.40	4.15	66.32
PM _{2.5}	10.0	N/D	10.64	3.32	1.19	N/D
SO _x	40.0	80.25	N/D	N/A	N/D	N/D
NO _x	40.0	84.90	24.61	N/A	N/D	N/D
VOC	40.0	2.54	0.25	N/A	N/D	N/D
CO	100.0	21.34	4.46	N/A	N/D	N/D
GHG (CO ₂ e)	100,000	N/D	N/D	N/A	N/D	N/D
HAPs	10.0 / 25.0	N/D	N/D	N/A	N/D	N/D

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

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 PM₁₀ are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Timberland Forest Products 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
- *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 10-6.165

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.

Ryan Schott
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated December 2, 2014, received December 3, 2014, designating TFP Holdings, LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

APPENDIX A

Abbreviations and Acronyms

%percent	m/s meters per second
°Fdegrees Fahrenheit	Mgal 1,000 gallons
acfmactual cubic feet per minute	MW megawatt
BACT Best Available Control Technology	MHDR maximum hourly design rate
BMPs Best Management Practices	MMBtu Million British thermal units
Btu British thermal unit	MMCF million cubic feet
CAM Compliance Assurance Monitoring	MSDS Material Safety Data Sheet
CAS Chemical Abstracts Service	NAAQS ... National Ambient Air Quality Standards
CEMS Continuous Emission Monitor System	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CFR Code of Federal Regulations	NO_x nitrogen oxides
CO carbon monoxide	NSPS New Source Performance Standards
CO₂ carbon dioxide	NSR New Source Review
CO₂e carbon dioxide equivalent	PM particulate matter
COMS Continuous Opacity Monitoring System	PM_{2.5} particulate matter less than 2.5 microns in aerodynamic diameter
CSR Code of State Regulations	PM₁₀ particulate matter less than 10 microns in aerodynamic diameter
dscf dry standard cubic feet	ppm parts per million
EQ Emission Inventory Questionnaire	PSD Prevention of Significant Deterioration
EP Emission Point	PTE potential to emit
EPA Environmental Protection Agency	RACT Reasonable Available Control Technology
EU Emission Unit	RAL Risk Assessment Level
fps feet per second	SCC Source Classification Code
ft feet	scfm standard cubic feet per minute
GACT Generally Available Control Technology	SDS Safety Data Sheet
GHG Greenhouse Gas	SIC Standard Industrial Classification
gpm gallons per minute	SIP State Implementation Plan
gr grains	SMAL Screening Model Action Levels
GWP Global Warming Potential	SO_x sulfur oxides
HAP Hazardous Air Pollutant	SO₂ sulfur dioxide
hr hour	tph tons per hour
hp horsepower	tpy tons per year
lb pound	VMT vehicle miles traveled
lbs/hr pounds per hour	VOC Volatile Organic Compound
MACT Maximum Achievable Control Technology	
µg/m³micrograms per cubic meter	

Mr. Mark Gencarelli
Vice President of Operations
Timberland Forest Products
3772 Highway 160 West
West Plains, MO 65775

RE: New Source Review Permit - Project Number: 2014-12-006

Dear Mr. Gencarelli:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions 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 were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 of RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty 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 administrative hearing commission, whose contact information is: Administrative Hearing Commission, Truman State Office Building, P.O. Box 1557, Jefferson City, Missouri 65102, www.oa.mo.gov/ahc.

If you have any questions regarding this permit, contact Ryan Schott, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:rsf

Enclosures

c: Southeast Regional Office
PAMS File: 2014-12-006
Permit Number: