

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: **102011-010** Project Number: 2011-04-035
Installation Number: 099-0167

Parent Company: Hunt Industrial Service Corporation

Parent Company Address: 2244 Front Street, Pevely, MO 63070

Installation Name: Hunt Industrial Service Corporation

Installation Address: 2244 Front Street, Pevely, MO 63070

Location Information: Jefferson County (S26, T41N, R5E)

Application for Authority to Construct was made for:

The installation of a new electric wood grinder. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

OCT 18 2011

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 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 start up 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."

Hunt Industrial Service Corporation
Jefferson County (S26, T41N, R5E)

1. **Operational Requirement**
Hunt Industrial Service Corporation shall keep all colorants in sealed containers whenever the materials are not in use. Hunt Industrial Service Corporation shall provide and maintain suitable, easily read, permanent markings on colorant containers used with this equipment.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW

Project Number: 2011-04-035
Installation ID Number: 099-0167
Permit Number:

Hunt Industrial Service Corporation
2244 Front Street
Pevely, MO 63070

Complete: April 14, 2011

Parent Company:
Hunt Industrial Service Corporation
2244 Front Street
Pevely, MO 63070

Jefferson County (S26, T41N, R5E)

REVIEW SUMMARY

- Hunt Industrial Service Corporation has applied for authority to construct a new electric wood grinder.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- 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.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of volatile organic compounds (VOC) and particulate matter (PM) are above their respective *de minimis* level.
- This installation is located in Jefferson County, a nonattainment area for the 8-hour ozone standard and the particulate matter less than two-and-a-half microns in diameter (PM_{2.5}) standard. Part of Jefferson County is a nonattainment area for lead, but this installation is not located in the Jefferson County lead nonattainment area. Jefferson County is 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 for this review. No model is currently available which can accurately predict ambient ozone concentrations caused by this installation's VOC emissions.
- Emissions testing are not required for the equipment.
- The installation is required to submit a Basic Operating Permit application within thirty (30) days after equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

The facility grinds and colors wood to make mulch. Before this project, the facility operated one wood grinder. The maximum hourly design rate was 12 yards of wood (2.59 tons) per hour. The coloring machine uses approximately 4 pounds of colorant per yard of wood and is bottlenecked by the wood grinder. No construction or operating permits were required for this installation because the potential emissions of all pollutants were below their respective *de minimis* levels. After the issuance of this permit, the facility will be considered a minor source for construction permits. The facility is required to apply for a Basic Operating Permit within thirty (30) days after startup of the new equipment.

The facility uses scrap wood it generates as fuel in a furnace and two boilers to heat its business, but the use of hand-fired equipment is prohibited by Missouri State Rule 10 CSR 10-5.040, *Use of Fuel in Hand-Fired Equipment Prohibited*. The facility has applied for and been granted a variance from the Missouri Air Conservation Commission (MACC) for this rule for a period of one year. This variance expires in December, 2011.

PROJECT DESCRIPTION

The facility proposes to add an electric wood grinder with a maximum hourly design rate of 100 yards (21.6 tons) of wood per hour. The output from the new grinder and the old grinder will both be sent to the same machine for coloring. The total design rate of the plant, after the issuance of this permit, will be 112 yards (24.19 tons) of wood per hour. The addition of the new wood grinder will increase the maximum colorant usage from 48 to 448 pounds per hour. No control device is used to control emissions at this facility.

EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from either the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, or from the EPA Factor Information Retrieval (FIRE) software. Emission factors for the unpaved haul roads were calculated using equation (1a) in AP-42, Chapter 13.2.2, *Unpaved Roads*, (11/06). Equation (2) from the same chapter was used to account for natural mitigation (i.e. rainfall). Emission factors for the paved haul roads were calculated using equation (2) in AP-42, Chapter 13.2.1, *Paved Road*, (1/11). Emission factors from load-in and load-out of materials from the equipment and the storage piles were calculated using equation (1) from AP-42, Chapter 13.2.4, *Aggregate Handling and Storage Piles*, (11/06). A moisture content of 8% was given for the wood. According to the research paper, *Water in Wood Pallets*, from the Virginia Polytechnic Institute and State University, Department of Wood Science and Forest Products, moisture content of wood in dry environments can vary between 8-10%. PM_{2.5}, PM₁₀ and PM emissions from the haul roads and load-in and load-out operations were distinguished by using different particle size multipliers in the equations.

The emission factor for wood sawing (scc 3-07-008-02) was used to estimate emissions from wood grinding. The PM₁₀ and PM emission factors were found in WebFIRE, the internet version of FIRE. PM_{2.5} emission factor was obtained by multiplying the PM₁₀ emission factor by 70.8%, which is the expected percentage of PM_{2.5} in PM₁₀. This percentage was taken from the Table, *Updated California Emissions Inventory Development and Reporting System (CEIDARS) Table with PM_{2.5} Fractions*, developed by the California Air Resources Board.

VOC emissions from the increase in colorant usage were calculated assuming that all of the VOC in the colorants are emitted. Potential emissions of the application represent the emissions from the increase in production, 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	¹ Existing Potential Emissions	Existing Actual Emissions (EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM _{2.5}	10.0	2.79	N/D	7.82	N/A
PM ₁₀	15.0	3.84	N/D	14.26	N/A
PM	25.0	6.38	N/D	32.57	N/A
SOx	40.0	0.06	N/D	N/A	N/A
NOx	40.0	1.26	N/D	N/A	N/A
VOC	40.0	6.23	N/D	51.60	N/A
CO	100.0	1.55	N/D	N/A	N/A
HAPs	10.0/25.0	0.22	N/D	N/A	N/A

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

Note 1: Existing potential emissions calculated from information supplied by the company.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of VOC and PM are above their respective *de minimis* level.

APPLICABLE REQUIREMENTS

Hunt Industrial Service Corporation 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 EIQ is required by April 1st, if submitting a hardcopy and by May 1st, if submitting online at www.dnr.mo.gov/moeis/main/login, for the previous years' emissions. Payment is due June 1st.
- *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 (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Chia-Wei Young
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated April 13, 2011, received April 14, 2011, designating Hunt Industrial Service Corporation 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 April 26, 2011.

Ms. Debra Hunt
Office Manager
Hunt Industrial Service Corporation
2244 Front Street
Pevely, MO 63070

RE: New Source Review Permit - Project Number: 2011-04-035

Dear Ms. Hunt:

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 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 Chia-Wei Young, at the Department's 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: cwyl

Enclosures

c: St. Louis Regional Office
PAMS File: 2011-04-035

Permit Number: