

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: 032009-001 Project Number: 2007-06-002

Parent Company: Doolittle Trailer Manufacturing, Inc.

Parent Company Address: 2455 Doolittle Drive, Holts Summit, MO 65043

Installation Name: Doolittle Trailer Manufacturing, Inc.

Installation Address: 2455 Doolittle Drive, Holts Summit, MO 65043

Location Information: Callaway County, S19, T45N, R10W

Application for Authority to Construct was made for:
Installation of three paint booths and an increase in welding capacity. This review was conducted in accordance with Section (5), 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.

MAR - 9 2009

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 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 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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| Permit No. | |
| Project No. | 2007-06-002 |

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."

Doolittle Trailer Manufacturing, Inc.
Callaway County, S19, T45N, R10W

1. Superseding Condition

The conditions of this permit supersede all special conditions found in the following permits previously issued by the Air Pollution Control Program:

Permit Number 552002-010A
Permit Number 552002-010

2. Emission Limitations

- A. Doolittle Trailer Manufacturing, Inc. shall emit less than 40.0 tons of Volatile Organic Compounds (VOCs) from the entire installation in any consecutive 12-month period. For the purpose of this permit the term "entire installation" shall include the following source operations and activities: Welding Operations (EP-01), Uppper Paint Booth (EP-02), Lower Paint Booth (EP-03), Dump Paint Booth (EP-05), Polyurethane Resin Application (EP-07) and two New Paint Paint Booths (EP-06 and EP-07).
- B. Doolittle Trailer Manufacturing, Inc. shall emit less than ten (10.0) tons individually or twenty-five (25.0) tons combined of Hazardous Air Pollutants (HAPs) from the entire installation in any consecutive 12-month period. "Entire installation" is defined in Special Condition 1.A.
- C. Doolittle Trailer Manufacturing, Inc. shall emit less than fifteen (15.0) tons of particulate matter with an aerodynamic diameter less than ten microns (PM₁₀) from the entire installation in any consecutive 12-month period. "Entire installation" is defined in Special Condition 1.A.
- D. Attachments A through D, or equivalent forms approved by the Air Pollution Control Program, shall be used to demonstrate compliance with Special Conditions 1(A) through 1(C). Doolittle Trailer Manufacturing, Inc. shall maintain all records required by this permit for not less than five (5)

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| Permit No. | |
| Project No. | 2007-06-002 |

SPECIAL CONDITIONS:

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

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 surface coatings, solvents and polyurethane resins.

- E. Doolittle Trailer Manufacturing, Inc. shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 1(D) indicate that the source exceeds the limitations of Special Conditions 1(A), 1(B) or 1(C).
- 3. Doolittle Trailer Manufacturing, Inc. shall utilize fabric filters to control particulate emissions from the paint booths (EP-02, EP-03, EP-05, EP-06 and EP-07). The fabric filters shall be maintained in accordance with the manufacturer's specifications or recommendations. Replacement filters shall be kept on hand at all times.
- 4. With regard to wood burning stoves or furnaces located on the premises, Doolittle Trailer Manufacturing, Inc. shall combust only untreated wood. Wood burning stoves or furnaces shall be used to provide building heat: operation of the wood burning stoves or furnaces solely for disposal of wood products is prohibited. Untreated wood is defined as follows: lumber and other wooden materials that have not been treated chemically for resistance to moisture, fire, fungi, insects and other pests, or has not otherwise been treated or manufactured with chemicals, or that does not contain adhesives or resins. Untreated wood does not include plywood, particle board, chipboard and wood with other than insignificant quantities of paint, coating or finish.

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

Project Number: 2007-06-002
Installation ID Number: 027-0051
Permit Number:

Doolittle Trailer Manufacturing, Inc.
2455 Doolittle Drive
Holts Summit, MO 65043

Complete Date: May 30, 2007

Parent Company:
Doolittle Trailer Manufacturing, Inc.
2455 Doolittle Drive
Holts Summit, MO 65043

Callaway County, S19, T45N, R10W

REVIEW SUMMARY

- Doolittle Trailer Manufacturing, Inc. has applied for authority to add three paint booths and increase welding capacity.
- Hazardous air pollutant (HAP) emissions are expected from the proposed equipment. HAPs emitted from priming and painting activities include methyl isobutyl ketone, ethylbenzene, toluene and xylenes.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- The Maximum Achievable Control Technology (MACT) standard for Surface Coating of Miscellaneous Metal Parts (40 CFR, Part 63, Subpart M) does not apply to this installation so long as the applicant complies with the permit limits for HAP emissions.
- Fabric filters are used to control the PM₁₀ emissions from the three (3) paint booths 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 VOC, HAP and PM₁₀ are conditioned to de minimis levels.
- This installation is located in Callaway 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 conditioned to de minimis levels.
- Emissions testing is not required for the equipment.
- An operating permit is not required due to the emission limits of this permit.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Doolittle Trailer Manufacturing, Inc. (Doolittle) operates a trailer manufacturing facility in Holts Summit, Missouri. The trailer manufacturing conducted at this installation involves metal fabrication, welding, assembly, painting and polyurethane resin application. Priming, painting and resin application activities occur primarily in paint booths with some touch-up work done outside of the paint booths. End products include a variety of utility trailers, enclosed trailers and dump trailers.

The following table describes the construction permit history for this installation. An operating permit is not required since the installation is limited, by this permit, to de minimis emissions.

Table 1 – Construction Permit History

| Permit Number | Date of issuance | Description |
|---------------|------------------|--|
| 052002-010a | August 25, 2003 | Technical correction to permit 052002-010. |
| 052002-010 | May 10, 2002 | Installation of 2 paint booths, 24 welding guns and 2 wood burning stoves. This permit limits VOC, HAP and PM ₁₀ emissions to de minimis. |

PROJECT DESCRIPTION

Doolittle has applied for authority to install three (3) additional paint booths, 26 additional welding guns and a polyurethane resin application. The application came as a result of a compliance inspection conducted in March 2005. One of the paint booths subject to this permitting action is already in operation. Doolittle wishes to maintain de minimis status and this permit has been written accordingly.

The March 2005 compliance inspection revealed that a third paint booth (EP-05, Dump Paint Booth) was installed in 2003. This paint booth is used to clean, prime and paint hydraulic dump trailers. The EP-05 Dump Paint Booth is described in the permit application as a Binks Downunder booth, 18 feet wide, 55 feet long and 13 feet high. Due to increased demand Doolittle has applied for authority to install two additional paint booths. The new EP-06 paint booth is 15 feet wide, 50 feet long and 16 feet high. The new EP-07 paint booth has not been purchased but will be of similar dimensions as the EP-06 paint booth. The EP-06 and EP-07 will both be equipped with two spray guns, and the physical arrangement of the booths will allow one worker to spray the bottom of a trailer while a second worker sprays the top of the trailer. All paint booths (new and existing) are operated under negative pressure and utilize fabric filters to

control particulate emissions.

Through this application Doolittle is also expanding welding operations to include 26 new welding guns and is adding a polyurethane resin application process. Polyurethane resin application is by spray application and will be conducted within the lower paint booth. Polyurethane resin application is currently being out-sourced but Doolittle would like to maintain the flexibility to re-commence this activity.

The maximum hourly design rates are estimated as follows in the permit application:

Table 2: Estimated Maximum Hourly Design Rates

| Description | MHDR | Units | VOC (lbs/gallon), typical |
|--|-------|---------------------|---------------------------|
| 26 New Welding Guns (EP-01) | 351 | lb/hr, welding wire | N/A |
| Dump Paint Booth (EP-05) | | | |
| Primer | 1 | Gall/hr | 5.26 |
| Top Coat | 1.78 | Gall/hr | 4.27 |
| Thinner/Cleaning | 0.094 | Gall/hr | 7.25 |
| New Paint Booth (EP-06) | | | |
| Primer | 1 | Gall/hr | 5.26 |
| Top Coat | 1.78 | Gall/hr | 4.27 |
| Thinner/Cleaning | 0.094 | Gall/hr | 7.25 |
| New Paint Booth (EP-07) | | | |
| Primer | 1 | Gall/hr | 5.26 |
| Top Coat | 1.78 | Gall/hr | 4.27 |
| Thinner/Cleaning | 0.094 | Gall/hr | 7.25 |
| Polyurethane Resin Application (EP-07) | 3.25 | Gall/hr | 0.4 |

EMISSIONS/CONTROLS EVALUATION

A mass balance approach was used in the analysis of PM₁₀, VOC and HAP emissions from the paint booth. For the purpose of calculating potential emissions from this application, it is assumed that all VOC and HAP contained in the paint, primer, solvent and polyurethane resin is emitted to the atmosphere. A transfer efficiency of 40%, and a control efficiency of 90 % was assumed for the paint booths to determine PM₁₀ emissions. Percentage of solids, VOC and HAP by weight and densities of the primer, paint, polyurethane resin and cleaning solvent were determined from Material Safety Data Sheets (MSDS) provided by the applicant.

Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). Upon request of the applicant the emissions of VOC, HAP and PM₁₀ are conditioned to de minimis levels. Emissions of VOC, HAP and PM₁₀ are expected from the paint booths. Emissions of HAP and PM₁₀ are expected from the welding operations. Emissions of VOC are expected from polyurethane resin application. Tracking sheets have been attached to ensure compliance with the VOC, the individual and combined HAPs and the PM₁₀ emissions limitation from the paint booths, resin application and wire welding operations.

The emission factor used in the potential emission calculations for the welding guns was

obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 12.19 *Electric Arc Welding* (1/95). The emission factor is based on GMAW welding with an E70S electrode. The following table provides an emissions summary for this project.

Table 3: Emissions Summary (tons per year)

| Pollutant | Regulatory De Minimis Levels | Existing Potential Emissions* | Existing Actual Emissions (2006 EIQ) | Potential Emissions of the Application | Installation-Wide Conditioned Potential |
|------------------------|------------------------------|-------------------------------|--------------------------------------|--|---|
| PM ₁₀ | 15.0 | 32.97 | N/D | 15.87 | 15.0 |
| SO ₂ | 40.0 | 0.01 | N/D | 0 | N/A |
| NO _x | 40.0 | 0.06 | N/D | 0 | N/A |
| VOC | 40.0 | 96.47 | 19.56 | 178.00 | 40.0 |
| CO | 100.0 | 5.05 | N/D | 0 | N/A |
| Ethylbenzene | 10.0 | 11.35 | 4.3 | 22.27 | 10.0 |
| Methyl Isobutyl Ketone | 10.0 | 3.5 | N/D | 18.26 | 10.0 |
| Toluene | 10.0 | 15.7 | 1.4 | 23.60 | 10.0 |
| Xylene | 10.0 | 33.61 | 7 | 64.48 | 10.0 |
| Combined HAPs | 25.0 | 65.88 | 14 | 129.10 | 25.0 |

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

* Existing potential emissions taken from the review summary for construction permit number 052002-010: does not include EP-05 – Dump Paint Booth emissions.

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 VOC, HAP and PM₁₀ are conditioned to de minimis levels.

APPLICABLE REQUIREMENTS

Doolittle Trailer Manufacturing, 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.

GENERAL REQUIREMENTS

- *Open Burning Requirements*, 10 CSR 10-6.045
- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *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
- *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-3.060

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 permit issuance, with special conditions.

Steve Jaques, P.E.
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 22, 2007, received May 30, 2007, designating Doolittle Trailer Manufacturing, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
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Mr. Charles Frank
General Manager
Doolittle Trailer Manufacturing, Inc.
2455 Doolittle Drive
Holts Summit, MO 65043

RE: New Source Review Permit - Project Number: 2007-06-002

Dear Mr. Frank:

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 Steve Jaques 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:sjl

Enclosures

c: Northeast Regional Office
PAMS File: 2007-06-002