

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: 032011-004 Project Number: 2010-05-078

Parent Company: Redneck Manufacturing LLC

Parent Company Address: 1101 E 12th, Lamar, MO 64759

Installation Name: Redneck Manufacturing LLC

Installation Number: 011-0042

Installation Address: 1101 E 12th, Lamar, MO 64759

Location Information: Barton County (S30, T32N, R30W)

Application for Authority to Construct was made for:

The installation of a new deer blind production line. 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.

MAR 04 2011

EFFECTIVE DATE

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

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.	2010-05-078

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."

Redneck Manufacturing LLC
Barton County (S30, T32N, R30W)

1. Emission Limitation
 - A. Redneck Manufacturing LLC shall emit less than ten (10.0) tons individually and twenty-five (25.0) tons of combined Hazardous Air Pollutants (HAPs) in any consecutive 12-month period from the entire installation, which consists of the following equipment/activities.
 - 1) Gel Coat Gun (EP1, EP3)
 - 2) Open Mold Fiberglass Coating (EP2)
 - 3) Chop Gun for Deer Blinds (EP4)
 - 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 Measures
 - A. Redneck Manufacturing LLC shall use the controlled spray procedures as outlined in the "CFA Controlled Spray Handbook."
 - B. Redneck Manufacturing LLC shall ensure that the mold containment flanges are in place during spraying operations in accordance with the "CFA Controlled Spray Handbook."
 - C. Redneck Manufacturing LLC shall keep records that verify the following, in accordance with the "CFA Controlled Spray Handbook."
 - 1) The spray gun pressure has been calibrated
 - 2) The operators have been trained in the techniques of controlled spraying.
3. Operational Requirement
 - A. Redneck Manufacturing shall only operate the gel coat gun, the open mold fiber glass coating and the chop gun between the hours of 7 AM and 4 PM.

Page No.	4
Permit No.	
Project No.	2010-05-078

SPECIAL CONDITIONS:

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

- B. Redneck Manufacturing LLC shall keep all gel coats and resins in sealed containers whenever the materials are not in use. Redneck Manufacturing LLC shall provide and maintain suitable, easily read, permanent markings on all of the gel coat and resin containers at the installation.
4. Record Keeping and Reporting Requirements
- A. Redneck Manufacturing 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. These records shall include Material Safety Data Sheets (MSDS) for all materials used
 - B. Redneck Manufacturing LLC shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 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: 2010-05-078
Installation ID Number: 011-0042
Permit Number:

Redneck Manufacturing LLC
1101 E 12th
Lamar, MO 64759

Complete: May 26, 2010

Parent Company:
Redneck Manufacturing LLC
1101 E 12th
Lamar, MO 64759

Barton County (T32N, R30W, S30)

REVIEW SUMMARY

- Redneck Manufacturing LLC has applied for authority to construct a deer blinds manufacturing line.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are styrene and methyl methacrylate (MMA).
- 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. Subpart WWWW, "National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production," does not apply to this installation because this installation is not a major source for HAP emissions. The facility accepted a limit of 10.0 tons per year (tpy) of each individual HAP and 25.0 tpy of combined HAPs in this permit so it would not be a major source.
- The installation will control volatile organic compound (VOC) and HAP emissions from the spray guns by using the controlled spray procedure outlined in the "CFA Controlled Spray Handbook."
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of all pollutants are conditioned below *de minimis* levels.

- This installation is located in Barton 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 styrene.
- Emissions testing is not required for the equipment.
- No Operating Permit is required for this installation.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Redneck Manufacturing LLC owns and operates an installation in Lamar, Missouri that manufactures auto body replicas and modular blinds. This facility is considered a *de minimis* source for construction permits. No permits have been issued to Redneck Manufacturing LLC from the Air Pollution Control Program. A no construction permit required determination was issued to the entire installation in 2007 (Project 2007-08-003).

PROJECT DESCRIPTION

The facility proposes to add a new line for the production of deer blinds. An existing mechanical air assisted spray gun will be used to coat the panels with gel coat and a new chop gun will coat the panels with resin and fiberglass. The facility is expected to use a maximum of 10 pounds of gel coat and 13 pounds of resin/fiberglass mix per panel. The facility is expected to produce a maximum of six panels per hour and a deer blind consists of six panels.

EMISSIONS/CONTROLS EVALUATION

Pollutants expected from the operation are styrene and methyl methacrylate (MMA), which are considered both VOC and HAP. Emissions were calculated using the "Unified Emission Factors for Open Molding of Composites" developed by the National Marine Manufacturer's Association (NMMA) and Composite Fabricators Association (CFA) published in 1999 in the paper "Technical Discussion of the Unified Emission Factors for Open Molding of Composites." The controlled emission factors were used because the facility will be using the controlled spray procedure as outlined in the "CFA Controlled Spray Handbook."

Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). The limits for HAPs (10.0 tpy individual HAP, 25.0 tpy combined HAP) were set to keep this facility from being a major source for HAPs. Since all of the VOC emitted are also HAPs, this limit would keep the total VOC emissions below 25.0 tpy.

The HAPs emissions were calculated using the HAPs content given in the Material Safety Data Sheets of the gel coats and resins. If the facility decides to use different gel coats and/or resins, it should contact the Air Pollution Control Program to see if a new permit review will be needed.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	¹ Existing Potential Emissions	Existing Actual Emissions (2009 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM _{2.5}	10.0	N/A	N/D	N/A	N/A
PM ₁₀	15.0	N/A	N/D	N/A	N/A
SO _x	40.0	N/A	N/D	N/A	N/A
NO _x	40.0	N/A	N/D	N/A	N/A
VOC	40.0	26.6	N/D	47.4	25.0
CO	100.0	N/A	N/D	N/A	N/A
HAPs	10.0/25.0	26.6	N/D	47.4	<10.0/25.0

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

Note 1: Existing potential emissions recalculated using latest information submitted by the company during the current project review.

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 all pollutants are conditioned below *de minimis* levels.

APPLICABLE REQUIREMENTS

Redneck Manufacturing 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 Emission of Odors*, 10 CSR 10-6.165

AMBIENT AIR QUALITY IMPACT ANALYSIS

The Air Pollution Control Program requires that modeling be performed if the emissions of an individual HAP are greater than its Screening Model Action Level (SMAL). First, HAP emissions from just the project would be modeled and compared to the Significance Level (SL) for that pollutant. The SL is 4% of the Risk Assessment Level (RAL). If the concentration of the HAP at the nearest property boundary is below the SL, then no further modeling is required. If the concentration of the HAP at the nearest property boundary is greater than the SL, then the HAP emission from the entire installation would have to be modeled and compared to the Risk Assessment Level (RAL) for that pollutant.

The Screening Model Action Level (SMAL) for styrene is 1.0 tons per year. Since the conditioned potential of styrene is 10.0 tons per year and greater than the SMAL, ambient impact analysis was performed for styrene. The styrene emissions from the project were modeled and the results show that they exceed the SL of 89.6 $\mu\text{g}/\text{m}^3$ on a 24-hour basis and the SL of 13.32 $\mu\text{g}/\text{m}^3$ on an annual basis. The styrene emissions from the entire installation were then modeled and the results show that they are below the RAL of 2,240 $\mu\text{g}/\text{m}^3$ on a 24-hour basis and 333 $\mu\text{g}/\text{m}^3$ on an annual basis. No modeling was performed for MMA because its emissions are below its SMAL of 10.0 tons per year.

Table 3: Styrene Modeling Results

24-Hour Averaging Period		
Year	Max Modeled Concentrations ($\mu\text{g}/\text{m}^3$)	Risk Assessment Level ($\mu\text{g}/\text{m}^3$)
2004	1,225.7	2,240
2005	913.5	2,240
2006	723.6	2,240
2007	936.6	2,240
2008	811.4	2,240
Annual Averaging Period		
2004	173.1	333
2005	184.0	333
2006	169.4	333
2007	173.8	333
2008	176.6	333

This permit contains conditions (no. 2 and 3) that require the facility to operate only between the hours of 7 AM and 4 PM each day and that the controlled spray procedure, as outlined in the “CFA Controlled Spray Handbook,” be used because modeling was performed using these assumptions.

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.

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 June 7, 2010, received June 7, 2010, designating Redneck Manufacturing LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Memorandum titled "Ambient Air Quality Impact Analysis (AAQIA) for Redneck Manufacturing, LLC – Revision," dated December 23, 2010.

Attachment A – Combined and Individual HAP Compliance Worksheet

Redneck Manufacturing LLC
 Barton County (S30, T32N, R30W)
 Project Number: 2010-05-078
 Installation ID Number: 011-0042
 Permit Number: _____

This sheet covers the month of _____ in the year _____

Copy this sheet as needed.

Column 1	Column 2	Column 3	Column 4	Column 5
Type of Process	Amount of Gel Coat or Resin Used (lbs)	Type of HAP	Emission Factors (lbs/ton)	(b) Emissions (tons)
Gel Coat Gun for Deer Blinds		Styrene	240.5	
Gel Coat Gun for Deer Blinds		MMA	66.6	
Gel Coat Gun for Automobile and Components		Styrene	175.5	
(a) Chop Gun for the Blinds		Styrene	82.42	
Open Mold Fiberglass Coating		Styrene	117	
(c) Total HAP Emissions Calculated for this Month in Tons:				
(d) Total HAP Emissions From the Previous 11 Months in Tons:				
(e) Total HAP Emissions For the Current 12-Month Period in Tons:				
(f) Total Styrene Emissions Calculated for this Month in Tons:				
(g) Total Styrene Emissions From the Previous 11 Months in Tons				
(h) Total Styrene Emissions for the Current 12-Month Period in Tons:				

- (a) Amount used for the deer blinds should only be the resin portion and not the fiberglass portion.
- (b) Emission (tons) calculated using $[\text{Column 2} \div 2,000 \times \text{Column 4}] \div 2,000$
- (c) Total HAP emissions (tons) for the current month calculated from summing Column 5
- (d) Total HAP emissions (tons) from the previous 11 months can be found by adding the total monthly HAPs emissions from Attachment A of the previous 11 months.
- (e) Total HAP emissions (tons) for the current 12-month period can be calculated by adding (c) and (d). A total of less than **25.0 tons per year** shows compliance.
- (f) Total styrene emissions (tons) for the current month can be calculated by adding styrene emissions (Column 5) of all the equipment emitting styrene.
- (g) Total styrene emissions (tons) for the previous 11 months can be found by adding the total monthly styrene emissions from Attachment A of the previous 11 months.
- (h) Total styrene emissions for the current 12-month period can be calculated by adding (f) and (g). A total of less than **10.0 tons per year** shows compliance.

Mr. Tim Riegel
President
Redneck Manufacturing, LLC
1101 E 12th
Lamar, MO 64759

RE: New Source Review Permit - Project Number: 2010-05-078

Dear Mr. Riegel:

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 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:cyl

Enclosures

c: Southwest Regional Office
PAMS File: 2010-05-078

Permit Number: