

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: 072012-006 Project Number: 2012-07-072
Installation Number: 109-0063

Parent Company: E.J.'S Fiberglass, LLC

Parent Company Address: 352 NW 60th Road, Lamar, MO 64759

Installation Name: E.J.'S Fiberglass, LLC

Installation Address: 14109 Lawrence 2160 Road, Mt. Vernon, MO 65712

Location Information: Lawrence County, T27N, R26W, S20

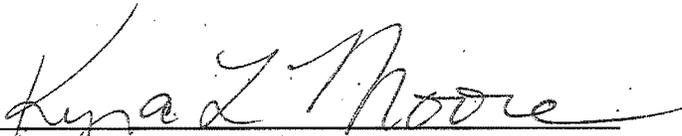
Application for Authority to Construct was made for:
an open mold and hand layup operation rated at 35.125 pounds of resin per hour and a gelcoat spray operation rated at 10.8 pounds per hour. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

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

AUG 01 2012

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 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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Permit No.	072012-006
Project No.	2012-07-072

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."

E.J.'S Fiberglass, LLC
Lawrence County, T27N, R26W, S20

1. Hazardous Air Pollutants (HAPs) Emission Limitations
 - A. E.J.'S Fiberglass, LLC shall not emit, on average, greater than 0.79 pounds per hour of styrene in any day for a total of no more than six (6) days per week from the entire installation. A week consists of Sunday through Saturday, inclusively. The installation consists of the emission units listed below:
 - 1) Gelcoat gun (EU-01)
 - 2) Hot pot hand lay up no-spray (EU-02)
 - B. Attachment A – *Styrene Compliance Tracking*, or its equivalent, such as an electronic form, approved by the Air Pollution Control Program, shall be used to demonstrate compliance with Special Conditions 1.A. The form should be duplicated as necessary.
2. Operational Requirement – Solvent and cleaning solutions
E.J.'S Fiberglass, LLC shall keep all solvents and cleaning solutions in sealed containers whenever the materials are not in use. E.J.'S Fiberglass, LLC shall provide and maintain suitable, easily read, permanent markings on all solvent and cleaning solution containers
3. Record Keeping and Reporting Requirements
 - A. E.J.'S Fiberglass, LLC 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. These records shall include Material Safety Data Sheets (MSDS) for all materials used.
 - B. E.J.'S Fiberglass, LLC shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than thirty (30) days after the end of the day during which any record required by this permit shows an exceedance of a limitation imposed by this permit.

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

Project Number: 2012-07-072

Installation ID Number: 109-0063

Permit Number: 072012-006

E.J.'S Fiberglass, LLC
14109 Lawrence 2160 Road
Mt. Vernon, MO 65712

Complete: February 21, 2012

Parent Company:
E.J.'S Fiberglass, LLC
352 NW 60th Road
Lamar, MO 64759

Lawrence County, T27N, R26W, S20

REVIEW SUMMARY

- E.J.'S Fiberglass, LLC has applied for authority to add the following equipment to their installation: an open mold and hand layup operation rated at 35.125 pounds of resin per hour and a gelcoat spray operation rated at 10.8 pounds per hour.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs emitted from this process are Methyl Methacrylate (CAS # 080-62-6), Styrene (CAS # 100-42-5), and Cobalt Compounds.
- 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 (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of HAPs are conditioned below de minimis levels.
- This installation is located in Lawrence 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.
- The installation is not required to perform emissions testing on the equipment.

- The installation is not required to have an operating permit.
- The review engineer recommends approval of this permit with special conditions.

PROJECT / INSTALLATION DESCRIPTION

E.J.'S Fiberglass, LLC will install hand lay-up hot pot and spray gun systems.

EJ's Fiberglass has chosen to take a limit of less than ten tons individually Hazardous Air Pollutants (HAPs) and less than 25 tons combined making the site an area source. No operating permit is required. This is a new installation and no permits have been issued to E.J.'s Fiberglass, LLC from the Air Pollution Control Program. They are located in Barton County in the town of Lamar. They will make sheets of fiberglass using Gelcoat.

The gelcoat process makes fiberglass reinforced products attractive with a high quality surface appearance. Gelcoat is a two part surface coating system of pigmented polyester resin (the basic ingredient of gelcoat) which "gels" against the mold surface and cures with the structural laminate. Gelcoat reproduces the mold surface, imparts color and protects the reinforcing fibers from external elements. A gelcoat of uneven thickness will cure at different rates over its surface. Controlling the application rate for even drying rates is an important factor in making a quality Gelcoat product. Gelcoat can be applied by brush or spray and this installation will use both types of application.

Hand lay-up and spray hot pot systems are being installed for applying gel coat. Limitations on application time, usually less than 30 minutes, require the batch to be completed to avoid cleanup problems. In this system, a measured amount of catalyst is stirred by hand directly into the container (pressure pot) which is then sprayed from a pressure feed tank or poured or rolled out with a hand roller to the desired thickness. This is currently the most accurate system, but uses a large quantity of clean up solvent and unforeseen delays can lead to lost hoses and a difficult cleaning job. Modern systems with pot liners and hose solvent saver systems can minimize these disruptions.

Dust-generating processes are machining and finishing of cured parts and in repair of damaged parts. Much of the dust generated in these processes can be very fine. More dust is usually generated in finishing and repair processes since large surface areas are typically involved. Grinding, routing and sanding are frequently used methods in both processes. The repair process may require the use of abrasive blasting as well as sanding to remove existing paint or coatings. Dust from flashing removal, finishing operations, sanding joints, or repairing defects was not supplied in the application.

EMISSIONS/CONTROLS EVALUATION

A detailed emission analysis may be found at Attachment B – *Emission Analysis*. The main pollutants expected from this operation are styrene and methyl methacrylate (MMA) both are considered VOCs and HAPs. Styrene and MMA emissions were calculated using the Unified Emission Factors for Open Molding of Composites" developed by the National marine Manufacturers Association (NMMA) and Composite Fabricators Association (CFA) published in 1999 paper "Technical Discussion of 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 out lined in The CFA Controlled Spray Handbook.

No emission factor is currently available for sanding or cutting of fiberglass. The closest process available is the sanding of retread tires, which has an emission factor of 9.0×10^{-7} pounds of particulate matter (PM) per pound processed. This emission factor is from the Environmental Protection Agency (EPA) document AP-42, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Fifth Edition, the “Emission Factor Tables,” Chapter 4.12, “Manufacture of Rubber Products,” (11/2008).

From the PM emissions, particulate matter less than two-and-a-half microns in diameter ($PM_{2.5}$) and particulate matter less than ten microns (PM_{10}) emissions from sanding and cutting of gelcoat were calculated by taking the PM emissions and multiplying by the percentage of $PM_{2.5}$ and PM_{10} that are in the PM. The particle size distribution was taken from the California Emissions Inventory Development and Reporting System (CEIDARS) table on the California Air Resources Board website. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8,760 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	Existing Potential Emissions ¹	Existing Actual Emissions ²	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	N/A	N/A	0.00	N/A
PM_{10}	15.0	N/A	N/A	0.00	N/A
$PM_{2.5}$	10.0	N/A	N/A	0.00	N/A
SOx	40.0	N/A	N/A	N/A	N/A
NOx	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	17.1 ³	4.57 ⁴
CO	100.0	N/A	N/A	N/A	N/A
HAPs	10.0 / 25.0	N/A	N/A	17.1	4.57
Styrene	10.0 ⁵ / 1.0	N/A	N/A	11.1	2.96
MMA	10.0 / 10.0	N/A	N/A	6.0	1.60
Cobalt Compounds	10.0 / 0.1	N/A	N/A	0.1	0.01

N/A = Not applicable

¹ New installation, no existing potential emissions to report.

² New installation, no existing actual emissions to report.

³ All of the HAPs are also considered VOCs.

⁴ VOCs will be limited as HAPs.

⁵ Styrene, MMA and cobalt compounds are individual HAPs, and as such, have the individual HAP limits. The second level listed for the individual HAP is the Screening Model Action Level (SMAL).

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 HAPs are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

E.J.'S Fiberglass, 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.

GENERAL REQUIREMENTS

- *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 10-6.165

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400 exemption based on 10 CSR 10-6.400(1)(B) 12. Emission units that at maximum design capacity have a potential to emit less than one-half (0.5) pounds per hour of particulate matter.

AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality modeling was performed to determine the ambient impact of styrene.

The Screening Model Action Level is 1.0 tons per year for styrene. The conditioned ton per year emission rate of styrene for E.J.'S Fiberglass, LLC is 2.96. Therefore, screen modeling was performed. The acceptable risk assessment levels for styrene are 2,240 micrograms per cubic meter (ug/m^3) 24-hour period, and 333 ug/m^3 annual.

Pollutant	Modeled Impact ug/m^3 Conditioned	NAAQS/AAL ug/m^3	Time Period
styrene	2,240	2,240	24-hour
styrene	320	333	Annual

A more detailed analysis can be found in Attachment B – *Emission Analysis*.

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.

Randy E. Raymond
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated January 30, 2012, received February 1, 2012, designating E.J.'S Fiberglass, LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Attachment B – Emission Analysis

E.J.'S Fiberglass, LLC

Project Number: 2012-07-072

Installation ID Number: 109-0063

Special Condition: limited to six (6) days per week, 0.79 pounds per hour of styrene

Maximum process rate	requested hours per day	requested pounds per day	unlimited pounds per hour	unlimited tons of product per year	actual tons of product per year	Conditioned pounds per day based on styrene limit
EU1 gelcoat	8.0	86.4	10.8	47.3	11.2	80.4
EU2 resin	8.0	281.0	35.1	153.8	36.5	261.6
		Total	45.93	201.2	47.8	342.0

	styrene		methyl methacrylate		cobalt compounds	PM
	EU1 gelcoat	EU2 resin	EU1 gelcoat	EU2 resin	EU1 + EU2 gelcoat + resin	EU1 + EU2 gelcoat + resin
emission factor - pounds per ton	208.0	80.6	60.0	60.0	cobalt compounds are 0.25% of HAPs	0.0000009 pounds per pound
unlimited pounds emitted per hour	1.12	1.42	0.32	1.05	0.01	0.00
unlimited tons emitted per year	4.92	6.20	1.42	4.62	0.04	0.00
unlimited total tons per year	11.12		6.03		0.04	0.00
unlimited total pounds per hour	2.54		1.38		0.01	0.00
conditioned pounds per hour	0.35	0.44	0.10	0.33	0.00	0.00
conditioned tons emitted	1.31	1.65	0.38	1.23	0.01	0.00
conditioned total tons per year	2.96		1.60		0.01	0.00
total conditioned pounds per hour	0.79		0.43		0.00	0.00
Screening Model Action Levels (tons per year)	1.0		10.0		0.1	N/A
Modeling Results 24-hr	7,220					
Conditioned Modeling Results 24-hr	2,240					

Continued on next page

Attachment B – Emission Analysis

Continued

	styrene		methyl methacrylate		cobalt compounds	PM
	EU1 gelcoat	EU2 resin	EU1 gelcoat	EU2 resin	EU1 + EU2 gelcoat + resin	EU1 + EU2 gelcoat + resin
Modeling Results Annual	1,203					
Conditioned Modeling Results Annual	320					
8-hr RAL					0.00889	
24-hr RAL	2,240		980			
Annual RAL	333		700			
10x Annual						

N/A = Not applicable

Modeling not required for these pollutants.

Mr. John Miller
Manager/Owner
E.J.'S Fiberglass, LLC
352 NW 60th Road
Lamar, MO 64759

RE: New Source Review Permit - Project Number: 2012-07-072

Dear Mr. Miller:

Enclosed with this letter is your permit to construct. Please study it carefully. 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 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 Randy E. Raymond, at the Department of Natural Resources' 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

Susan Heckenkamp
New Source Review Unit Chief

SH:rrk

Enclosures

c: Southwest Regional Office
PAMS File: 2012-07-072

Permit Number: