

STATE OF MISSOURI

PERMIT BOOK



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: **042013-007** Project Number: 2013-02-025
Installation Number: 105-0050

Parent Company: MEP Acquisition Corp d/b/a Marine Electrical Products

Parent Company Address: 1401 Tower Road, Lebanon, MO 65536

Installation Name: MEP Acquisition Corp d/b/a Marine Electrical Products

Installation Address: 27490 Highway 5, Lebanon, MO 65536

Location Information: Laclede County, S26, T35, R16

Application for Authority to Construct was made for:
Moving a gelcoat spray booth from 1401 Tower Road to 27490 Highway 5 and the installation of a resin spray booth. This review was conducted in accordance with Section (5) of 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.

APR 18 2013

EFFECTIVE DATE

Handwritten signature of Kyna 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 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, 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(12)(A)10. "Conditions required by permitting authority."

MEP Acquisition Corp d/b/a Marine Electrical Products
Laclede County, S26, T35, R16

1. **Superseding Condition**
The conditions of this permit supersede all special conditions found in the previously issued construction permits 052009-007 and 072012-001.
2. **HAP Emission Limitations**
 - A. MEP Acquisition Corp d/b/a Marine Electrical Products shall emit less than 10.0 tons of Styrene (100-42-5) and 25.0 tons combined of HAPs in any consecutive 12-month period from the entire installation as listed in Table 1.

Table 1: Installation-wide Equipment List

Emission Point	Description	Facility	Status
EP01	Resin Spray Booth	1401 Tower Road	Existing
EP02	Resin Spray Booth		
EP03A	Resin Spray Booth		
EP03B	Resin Spray Booth		
EP04	Paint Booth and Curing Oven		
EP01-5	Gelcoat Spray Booth	27490 Highway 5	New
EP02-5 and EP03-5	Resin Spray Booth ¹		

¹There is only one emission unit, Resin Spray Booth, which spans two rooms resulting in two separate emission points, EP02-5 and EP03-5.

- B. Attachments A and B or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 2.A.
3. **Control Device Requirement – Spray Booth Filters**
 - A. MEP Acquisition Corp d/b/a Marine Electrical Products shall control particulate emissions from Resin Spray Booths (EP01, EP02, EP03A, EP03B, EP02-5, & EP03-5), Gelcoat Spray Booth (EP01-5), and Paint Booth (EP04) using filters as specified in the permit application:

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SPECIAL CONDITIONS:

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

- B. The filters shall be operated and maintained in accordance with the manufacturer's specifications.
 - C. Replacement filters shall be kept on hand at all times. The filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
 - D. MEP Acquisition Corp d/b/a Marine Electrical Products shall maintain a copy of the filter manufacturer's performance warranty on site.
 - E. MEP Acquisition Corp d/b/a Marine Electrical Products shall maintain an operating and maintenance log for the filters including maintenance activities, with inspection schedule, repair actions, and replacements, etc.
4. Operational Requirement – Resin/gelcoat/paint
- A. MEP Acquisition Corp d/b/a Marine Electrical Products shall keep the resins/gelcoats/paints in sealed containers whenever the materials are not in use. MEP Acquisition Corp d/b/a Marine Electrical Products shall provide and maintain suitable, easily read, permanent markings on all resin/gelcoat/paint solution containers used with this equipment.
5. Record Keeping and Reporting Requirements
- A. MEP Acquisition Corp d/b/a Marine Electrical 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. These records shall include MSDS for all materials used.
 - B. MEP Acquisition Corp d/b/a Marine Electrical Products shall report to the Air Pollution Control Program's Compliance/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: 2013-02-025
Installation ID Number: 105-0050
Permit Number:

MEP Acquisition Corp d/b/a Marine Electrical Products Complete: March 8, 2013
27490 Highway 5
Lebanon, MO 65536

Parent Company:
MEP Acquisition Corp d/b/a Marine Electrical Products
1401 Tower Road
Lebanon, MO 65536

Laclede County, S26, T35, R16

REVIEW SUMMARY

- MEP Acquisition Corp d/b/a Marine Electrical Products has applied for authority to move a gelcoat spray booth from 1401 Tower Road to 27490 Highway 5 and install a resin spray booth.
- HAP emissions are expected from the proposed equipment. MSDS for the gelcoats and resin to be used at 27490 Highway 5 indicate emissions of Styrene (100-42-5), Methyl Methacrylate (80-62-5), and Cobalt Compounds (20-07-5).
- 40 CFR Part 63, Subpart VVVV – *National Emission Standard for HAP for Boat Manufacturing* is not applicable to the installation and has not been applied within this permit. The installation is not a major source of HAP and does not meet the applicability requirements of §63.5683(a)(2).
- 40 CFR Part 63, Subpart WWWW – *National Emissions Standards for HAP: Reinforced Plastic Composites Production* is not applicable to the installation and has not been applied within this permit. The installation is not a major source of HAP and does not meet the applicability requirements of §63.5785(a).
- 40 CFR Part 63, Subpart HHHHHH – *National Emission Standards for HAP: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources* is not applicable to the installation and has not been applied within this permit. MSDS for the gelcoats, resins, and paints used at the installation do not indicate chromium, lead, manganese, nickel, or cadmium; therefore, the installation does not meet the applicability requirements of §63.11169(c).
- The installation is required by Special Condition 3 to use filters to control particulate emissions from coating operations.

- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060 *Construction Permits Required*. Potential emissions of HAP and Styrene are conditioned below de minimis levels.
- This installation is located in Laclede 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 (100-42-5).
- Emissions testing is not required for the equipment.
- No Operating Permit is required for the installation at this time.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

MEP Acquisition Corp d/b/a Marine Electrical Products (MEP) operates an electrical shroud (dashboard) manufacturing facility for small fishing and pleasure boats. The fiberglass or plastic shrouds are fitted with instrumentation such as speedometers, gas gauges, and switches. The assembled shroud has all the necessary instrumentation and wiring for the make and model of boat it will be installed in at the boat manufacturing facility.

MEP first began operating at 22468 Pleasant Drive in Lebanon under facility ID 105-0037; however, this facility was destroyed by fire on March 5, 2005. The installation rebuilt at 1401 Tower Road in Lebanon under facility ID 105-0050.

The following New Source Review permits have been issued to MEP from the Air Pollution Control Program.

Table 2: Permit History

Permit Number	Description	Facility ID
102001-012	Construction of a resin booth, paint booth, and curing oven	105-0037
052009-007	Installation of four resin booths, a paint booth, and a curing oven	105-0050
072012-001	Installation of a gelcoat booth	

PROJECT DESCRIPTION

MEP has outgrown their facility at 1401 Tower Road. To expand their operations the installation has leased a second property at 27490 Highway 5. The gelcoat booth permitted under Construction Permit 072012-001 will not be installed at 1401 Tower Road, but will instead be installed at 27490 Highway 5 along with an additional resin booth.

The definition of *installation* at 10 CSR 10-6.020(2)(l)17 includes all source operations that share the same SIC code, are located on one or more contiguous or adjacent properties, and are under common control. MEP's two facilities both share the same SIC code and are under common control. The Air Pollution Control Program has determined that the two facilities are also located on one or more contiguous or adjacent properties. This determination is based upon an EPA letter dated August 7, 1997 (available at: <http://www.epa.gov/region07/air/title5/t5memos/util-at2.pdf>) in which EPA determined that the phrase "contiguous or adjacent" requires only that two facilities are near each other, but do not necessarily have to be touching. The installation has indicated that shipping will only occur from the 1401 Tower Road facility, which further indicates that 27490 Highway 5 cannot operate as a separate independent installation.

Gelcoat Booth (EP01-5) and Resin Booth (EP02-5 and EP03-5) will each use a Mechanical Non-Atomized Spray Gun. The MHDRs of the Gelcoat Booth and Resin Booth are 1.5 gal/hr and 4.6 gal/hr, respectively. Each booth will be equipped with a filter to control particulate emissions. A control efficiency of 98 percent was given for the filters. The maximum pollutant concentrations for the gelcoats and resin used, as obtained from MSDS submitted with the permit application, are provided in Table 3.

Table 3: Gelcoats and Resin MSDS Information

	Maximum Content (wt %)						Density (lb/gal)
	VOC	Solids	HAP	Styrene	Methyl Methacrylate	Cobalt 2-Ethylhexanoate	
Gelcoat	30.5	41	31.5	27.5	3.0	1.0	11.663
Resin	34.0	41	35.0	34.0	-	1.0	9.1634

EMISSIONS/CONTROLS EVALUATION

Potential emissions of VOC, PM, Methyl Methacrylate, and Cobalt were calculated by mass balance using the maximum pollutant contents obtained from the MSDS as listed in Table 3. Note: The amount of Cobalt in Cobalt 2-Ethylhexanoate for comparison with the SMAL was obtained by taking the ratio of Cobalt's molecular weight (58.933) to Cobalt 2-Ethylhexanoate's molecular weight (345.34).

Potential emissions of Styrene were calculated using the method described in the Unified Emissions Factors for Open Molding of Composites (July 23, 2001) for non-atomized application.

An emissions summary is listed in Table 4. Existing potential emissions of the installation were taken from Construction Permit 072012-001. Existing actual emissions

were obtained from the installation's 2011 EIQ. Potential emissions of the application represent potential emissions from the new equipment, assuming continuous operation (8,760 hours per year).

Table 4: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2011 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	12.57	-	2.10	N/A
PM ₁₀	15.0	12.57	-	2.10	N/A
PM _{2.5}	10.0	N/D	-	N/A	N/A
SO _x	40.0	10.10	-	N/A	N/A
NO _x	40.0	1.63	-	N/A	N/A
VOC	40.0	36.83	-	11.15	N/A ¹
CO	100.0	0.22	-	N/A	N/A
GHG (CO ₂ e)	100,000	1,445.35	-	N/A	N/A
Combined HAP	25.0	26.0	3.5	11.16	<25.0
Styrene	1.0 ²	10.00	-	8.85	<10.0
Methyl Methacrylate	10.0 ²	7.55	-	2.30	N/A
Cobalt	0.1 ²	0.31	-	0.01	N/A

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

¹The majority of VOC emissions from the installation are styrene; therefore, the 10.0 tpy Styrene limit also limits VOC emissions from the installation. The new installation conditioned potential for VOC is 36.83 tpy.

²This value represents the SMAL. The de minimis level for this individual HAP is 10.0 tpy.

Potential project emissions of Methyl Methacrylate and Cobalt are below their respective SMALs; therefore, no modeling was performed for these pollutants.

Potential project emissions of Styrene exceed the SMAL. Modeling was conducted to ensure Styrene emissions are below the Risk Assessment Level (RAL). For additional explanation see the Ambient Air Quality Impact Analysis section of this permit.

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 HAP and Styrene are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

MEP Acquisition Corp d/b/a Marine Electrical 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.

GENERAL REQUIREMENTS

- 10 CSR 10-6.065 *Operating Permits*
- 10 CSR 10-6.110 *Submission of Emission Data, Emission Fees and Process Information*
- 10 CSR 10-6.165 *Restriction of Emission of Odors*
- 10 CSR 10-6.170 *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*
- 10 CSR 10-6.220 *Restriction of Emission of Visible Air Contaminants*

AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality modeling was performed to determine the ambient impact of Styrene (100-42-5) as project potential emissions exceed Styrene's SMAL of 1.0 tpy. Modeling was conducted using AERSCREEN. Based on the stack parameters in the application for the new Gelcoat Booth (EP-01-5) and new Resin Booth (EP-02-5 and EP-03-5), this project will not exceed the RAL for Styrene.

Table 5: Screening Model Results

Pollutant	Modeled Impact ($\mu\text{g}/\text{m}^3$)	RAL ($\mu\text{g}/\text{m}^3$)	Time Period
Styrene (100-42-5)	328	2,240	24-Hour
	55	333	Annual

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060 *Construction Permits Required*, I recommend this permit be granted with special conditions.

Alana L. Rugen, EIT
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 February 6, 2013, received February 8, 2013, designating MEP Acquisition Corp d/b/a Marine Electrical Products as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Unified Emissions Factors for Open Molding of Composites
- MSDS

Attachment A – Styrene Compliance Worksheet

MEP Acquisition Corp d/b/a Marine Electrical Products
 Laclede County, S26, T35, R16
 Project Number: 2013-02-025
 Installation ID Number: 105-0050
 Permit Number: _____

This sheet covers the period from _____ to _____.
(month, year) (month, year)

Material Used (Name, type)	Amount of Material Used (gal)	Density (lb/gal)	Styrene Content (Weight percent)	Styrene Emissions ¹ (tons)
Monthly Styrene Emissions² (ton/month):				
12-month Rolling Total Styrene Emissions³ (tpy):				

¹Styrene Emissions (tons) = Amount of Material Used (gal) x Density (lb/gal) x Styrene Content (wt%) x 0.0005 (ton/lb)
²Monthly Styrene Emissions (ton/month) = The sum of each material's Styrene Emissions (tons)
³12-month Rolling Total Styrene Emissions (tpy) = This month's Monthly Styrene Emissions (ton/month) + the previous 11 month's Monthly Styrene Emissions (ton/month). **The permittee is in compliance with Special Condition 2.A if 12-month Rolling Total Styrene Emissions are less than 10.0 tpy.**

APPENDIX A

Abbreviations and Acronyms

%	percent	m/s	meters per second
°F	degrees Fahrenheit	Mgal	1,000 gallons
acfm	actual 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
CO_{2e}	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	SIC	Standard Industrial Classification
GHG	Greenhouse Gas	SIP	State Implementation Plan
gpm	gallons per minute	SMAL	Screening Model Action Levels
gr	grains	SO_x	sulfur oxides
GWP	Global Warming Potential	SO₂	sulfur dioxide
HAP	Hazardous Air Pollutant	tph	tons per hour
hr	hour	tpy	tons per year
hp	horsepower	VMT	vehicle miles traveled
lb	pound	VOC	Volatile Organic Compound
lbs/hr	pounds per hour		
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		

Ms. Joy Throop
EH&S Manager
MEP Acquisition Corp d/b/a Marine Electrical Products
1401 Tower Road
Lebanon, MO 65536

RE: New Source Review Permit - Project Number: 2013-02-025

Dear Ms. Throop:

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 submittal of a Basic operating 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 Alana Rugen, 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 attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:ark

Enclosures

c: Southwest Regional Office
PAMS File: 2013-02-025

Permit Number: