

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: **102013-001**

Project Number: 2012-12-037
Installation Number: 201-0128

Parent Company: Armor Lite Trailer Manufacturing LLC

Parent Company Address: 1190 State Highway H, Sikeston, MO 63801

Installation Name: Armor Lite Trailer Manufacturing LLC

Installation Address: 1190 State Highway H, Sikeston, MO 63801

Location Information: Scott County, S3, T26N, R14W

Application for Authority to Construct was made for:

Installation of a trailer manufacturing facility which includes a plasma cutter, a gas metal arc welder, surface blasting, surface coating, and a natural gas heater. This review was conducted in accordance with Section (6), 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.

OCT - 2 2013
EFFECTIVE DATE

Handwritten signature of Kyma 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(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.	2012-12-037

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.”

Armor Lite Trailer Manufacturing LLC
 Scott County, S3, T26N, R14W

1. Manganese Metal Emission Limitation
 - A. Armor Lite Trailer Manufacturing LLC shall emit less than 0.8 tons of manganese metal in any consecutive 12-month period from the entire installation as shown in Table 1.
 - B. Attachment A or an equivalent form, such as an electronic form, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 1.A.

2. PM_{2.5} Emission Limitation
 - A. Armor Lite Trailer Manufacturing LLC shall emit less than 10.0 tons of PM_{2.5} in any consecutive 12-month period from the entire installation as shown in Table 1.
 - B. Attachment B and Attachment C shall be used to demonstrate compliance with Special Condition 2.B. Equivalent forms, such as electronic forms, that are approved by the Air Pollution Control Program may be used to demonstrate compliance with Special Condition 2

Table 1: Emission Units

Emission Unit	Description
EU-01	Surface Coating Operation
EU-02	Natural Gas Air Heaters
EU-03	Plasma Cutting Table
EU-04	Gas Metal Arc Welding
EU-05	Manual Abrasive Blasting
EU-06	Handheld Cutting
EU-07	Sealant Application

Page No.	4
Permit No.	
Project No.	2012-12-037

SPECIAL CONDITIONS:

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

3. Capture Device Requirement – Permanent Total Enclosure
 - A. Armor Lite Trailer Manufacturing LLC shall operate each of the air atomized spray guns within a permanent total enclosure such that all emissions associated with the surface coating materials are controlled by dust collector.
 - B. Armor Lite Trailer Manufacturing LLC shall verify, within 30 days of the startup of the surface coating operation, that the respective permanent total enclosure has 100 percent capture efficiency according to the procedures of EPA Test Method 204 *Criteria for and Verification of a Permanent or Temporary Total Enclosure*, set forth in 40 CFR Part 51, Appendix M.
 - C. Armor Lite Trailer Manufacturing LLC shall maintain an operating and maintenance log associated with each permanent total enclosure which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, time, date and duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
4. Control Device Requirement-Cartridge Filter
 - A. Armor Lite Trailer Manufacturing LLC shall control emissions from the air atomized spray guns using a cartridge filter within a permanent total enclosure as specified in the permit application.
 - B. The cartridge filter shall be operated and maintained in accordance with the manufacturer's specifications. The cartridge filter shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources' employees may easily observe them.
 - 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. Armor Lite Trailer Manufacturing LLC shall monitor and record the operating pressure drop across the cartridge filter at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

Page No.	5
Permit No.	
Project No.	2012-12-037

SPECIAL CONDITIONS:

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

- E. Armor Lite Trailer Manufacturing LLC shall maintain a copy of the cartridge filter manufacturer's performance warranty on site.
 - F. Armor Lite Trailer Manufacturing LLC shall maintain an operating and maintenance log for the cartridge filters which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
5. Use of Alternative Coating in the Spray Painting Booth
- A. When considering using an alternative coating in the painting booth that is different than a material listed in the Application for Authority to Construct, Armor Lite Trailer Manufacturing LLC shall calculate the potential emissions of VOCs and all individual HAP in the alternative material.
 - B. Armor Lite Trailer Manufacturing LLC shall seek approval from the Air Pollution Control Program before use of the alternative material in the following cases:
 - 1) If the potential VOC emissions for the alternative material is equal to or greater than 130.4 tons per year, or
 - 2) If the potential individual HAP emissions for the alternative material are equal to or greater than the screening model action level (SMAL) for any chemical listed in Appendix B, or the most recent HAP SMAL table located at <http://dnr.mo.gov/env/apcp/docs/cp-hapsmaltbl6.pdf>
 - C. Attachment D, or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 5.B.
6. Operational Requirement - Solvent Cloths
- A. Armor Lite Trailer Manufacturing LLC shall keep all solvents and cleaning solutions in sealed containers whenever the materials are not in use. Armor Lite Trailer Manufacturing LLC shall provide and maintain suitable, easily read, permanent markings on all solvents and cleaning solution containers used with this equipment.

Page No.	6
Permit No.	
Project No.	2012-12-037

SPECIAL CONDITIONS:

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

7. Record Keeping and Reporting Requirements
 - A. Armor Lite Trailer Manufacturing 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 MSDS for all materials used
 - B. Armor Lite Trailer Manufacturing LLC shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 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 (6) REVIEW

Project Number: 2012-12-037
Installation ID Number: 201-0128
Permit Number:

Armor Lite Trailer Manufacturing LLC
1190 State Highway H
Sikeston, MO 63801

Complete: January 3, 2013

Parent Company:
Armor Lite Trailer Manufacturing LLC
1190 State Highway H
Sikeston, MO 63801

Scott County, S3, T26N, R14W

REVIEW SUMMARY

- Armor Lite Trailer Manufacturing LLC has applied for authority to install a plasma cutter, a gas metal arc welder, abrasive surface blasting, surface coating booth, and a natural gas heater at a trailer manufacturing facility.
- HAP emissions are expected from the proposed equipment. HAPs of concern from this process are associated with welding, surface coating operations, and natural gas combustion.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- 40 CFR 63 Subpart HHHHHH (MACT 6H), National Emission Standard for Hazardous Air Pollutants: *Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources*, applies to this facility because at least one of the provided coatings contains a target HAP.
- 40 CFR 63 Subpart XXXXXX (MACT 6X), National Emission Standard for Hazardous Air Pollutants: *Area Source Standards for Nine Metal Fabrication and Finishing Source Categories*, does not apply to this facility because the SIC and NAICS codes do not match the EPA supplied list of source categories.
- None of the NESHAPs apply to this installation.
- A paint booth equipped with a cartridge filter is being used to control the emissions of particulate matter from the surface coating operations at this facility.
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM_{2.5} are conditioned below the de minimis level. Potential emissions of VOC are above the de minimis level but remain below the major source level.

- This installation is located in Scott 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 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 is not required for the equipment.
- An Intermediate Operating Permit is required within 90 days of operation if the facility voluntarily accepts a 100.0 ton per year limit on VOC emissions in the Operating Permit. Otherwise, a Part 70 Operating Permit is required within one year of startup operation.
- Approval of this permit is recommended with special conditions.

INSTALLATION/PROJECT DESCRIPTION

Armor Lite Trailer Manufacturing LLC (Armor Lite) has applied for authority to install a plasma cutter (EU-01), a gas metal arc welder (EU-02), abrasive surface blasting (EU-03), surface coating booth (EU-04), and a natural gas heater (EU-05) at a trailer manufacturing facility. Armor Lite will locate the facility in Sikeston, Missouri. Armor Lite will be considered a minor source for construction permitting purposes and has the option to be an Intermediate source or a Part 70 source for operating permit purposes.

Armor Lite will size, form, weld, surface blast, and surface coat steel and other parts in order to manufacture the final trailer products. Emissions from the surface coating operation will be controlled by a paint booth equipped with a cartridge filter and a computer system that will maintain a pressurized state within the booth during coating operations. Armor Lite is capable of manufacturing a maximum of one trailer every two hours based on set up and removal times for each process involved in the manufacturing process. This limitation would allow up to 12 trailers to be manufactured per day. In order to remain conservative, the potential to emit was calculated under the assumption that Armor Lite can manufacture 15 trailers per day (which is 12 trailers multiplied by a 25% safety factor). The maximum design rate per trailer for welding is based on a maximum of 80 pounds of weld wire per trailer which was provided by Armor Lite Trailer Manufacturing LLC. Potential emissions of plasma cutting and handheld cutting (EU-06) are based on emission rates from an Environmental Australia National Pollutant Inventory publication titled *Emission Estimation Technique Manual for Structural & Fabricated Metal*, Section 3.1.1 *Dry and Semi-dry Cutting*, December 1999. The maximum design rate per trailer for abrasive blasting is based on information provided by Armor Lite Trailer Manufacturing LLC which indicated that 21.7 pounds of

abrasive medium is used per trailer. In order to remain conservative, a 15% safety factor was added to the 21.7 pounds of abrasive medium which equates to 25 pounds of abrasive medium per trailer. The maximum design rate per trailer for surface coating is based on information supplied by Armor Lite Trailer Manufacturing LLC which indicated that 337 gallons of paint and 245 gallons of primer are required to coat 33 trailers. The paint and primer usage translates to 10.2 gallons of paint per trailer and 7.42 gallons of primer per trailer. The maximum design rate per trailer is considered a conservative estimation because Armor Lite Trailer Manufacturing LLC indicated that there was 37 gallons of waste coating (paint and primer following the coating of the 33 trailers. The maximum hourly design rate of the natural gas heater is 2,900 standard cubic feet of natural gas per hour.

No permits have been issued to Armor Lite Trailer Manufacturing LLC from the Air Pollution Control Program.

EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the following EPA documents:

- AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.4 *Natural Gas Combustion*, July 1998.
- AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 12.19 *Electric Arc Welding*, January 1995.
- AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 13.2.6 *Abrasive Blasting*, October 1997.

The potential emission rates from handheld steel cutting (EU-06) and plasma cutting (EU-01) were obtained from an Environmental Australia National Pollutant Inventory publication titled *Emission Estimation Technique Manual for Structural & Fabricated Metal*, Section 3.1.1 *Dry and Semi-dry Cutting*, December 1999. Potential emissions from the surface coating operation (EU-04) were calculated using a mass balance approach. 100% of VOC associated with surface coating were assumed to be emitted to the ambient atmosphere. Transfer efficiencies equal to 50% were applied to all particulate emissions associated with surface coating. A paint booth equipped with a filter and a computer system that will maintain a pressurized state in the booth will control particulate emissions from the surface coating operation. Potential particulate emissions from surface coating assumes a capture efficiency equal to 100% within the booth and control efficiency equal to 95% for the filter associated with the booth.

The following table provides an emissions summary for this project. Existing potential emissions and existing actual emissions are not available because this is a new facility. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). According to Armor Lite, this facility is capable of completing one trailer every two hours based on the set up and removal time for each process involved in the manufacturing process which equates to 12 trailers per day. Potential emissions are based on a daily manufacturing rate equal to 15 trailers per day. By applying a 25% safety factor to the daily manufacture rate, the potential to emit is assumed to be conservative.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels/SMAL*	Existing Potential Emissions	Existing Actual Emissions (2012 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	N/A	N/A	16.18	<10.0
PM ₁₀	15.0	N/A	N/A	16.18	<10.0
PM _{2.5}	10.0	N/A	N/A	16.18	<10.0
SO _x	40.0	N/A	N/A	0.008	N/A
NO _x	40.0	N/A	N/A	3.84	N/A
VOC	40.0	N/A	N/A	130.44	N/A
CO	100.0	N/A	N/A	1.067	N/A
GHG (CO ₂ e)	100,000	N/A	N/A	1,532.9	N/A
GHG (mass)	0.0 / 100.0	N/A	N/A	1,524.3	N/A
HAPs	10.0/25.0	N/A	N/A	8.51	N/A
Manganese Metal	0.8*	N/A	N/A	1.02	<0.8

N/A = Not Applicable

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 PM_{2.5} are conditioned below the de minimis level. Potential emissions of VOC are above the de minimis level but remain below the major source level.

APPLICABLE REQUIREMENTS

Armor Lite Trailer 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
- *Operating Permits*, 10 CSR 10-6.065
- *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 applies to the handheld cutting operation. Armor Lite Manufacturing LLC remains in compliance with this rule.
- *MACT Regulations*, 10 CSR 10-6.075
 - *National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources*, 40 CFR Part 63, Subpart HHHHHH applies to the surface coating operations at this facility.
- *Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-6.405

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.

J Luebbert
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 December 18, 2012, received December 18, 2012, designating Armor Lite Trailer Manufacturing LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Environmental Australia National Pollutant Inventory publication, *Emission Estimation Technique Manual for Structural & Fabricated Metal*, Section 3.1.1 *Dry and Semi-dry Cutting*, December 1999.

Attachment A – Manganese Metal Compliance Sheet

Armor Lite Trailer Manufacturing LLC
 Scott County, S3, T26N, R14W
 Project Number: 2012-12-037
 Installation ID Number: 201-0128
 Permit Number: _____

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

(a)	(b)	(c)	(d)	(e)	(f)	(g)
Month, Year	Handheld Cutting (hours)	Emission Factor	Monthly Emissions (tons)	Monthly Emissions from Previous Year (tons)	Previous 12 Month Emission Total (tons)	Current 12 Month Emission Total (tons)
	Plasma Cutting (hours)					
	Weld Wire Used (pounds)					
EX: 07/2013	100.0	0.304	0.037	0.01	0.51	0.537
	1000.0	0.0397				
	1000.0	0.00318				
		0.304				
		0.0397				
		0.00318				
		0.304				
		0.0397				
		0.00318				
		0.304				
		0.0397				
		0.00318				
		0.304				
		0.0397				
		0.00318				
		0.304				
		0.0397				
		0.00318				

- a) Record the date
- b) Record the number of hours for handheld cutting, the number of hours for plasma cutting, and pounds of weld wire used
- c) Emission Factor for the specific activity
- d) Calculate using the following equation: $(d) = (b)_{\text{handheld}} * (c)_{\text{handheld}} / 2000 + (b)_{\text{plasma cutting}} * (c)_{\text{plasma cutting}} / 2000 + (b)_{\text{Weld Wire Used}} * (c)_{\text{Weld Wire Used}} / 2000$
- e) Record the emissions from this month last year
- f) Record the 12-month rolling total from last month: $(g)_{\text{last month}}$
- g) Calculate using the following equation: $(g) = (d) + (f) - (e)$

A 12-month rolling total less than **0.8** tons of manganese metal implies compliance with Special Condition 1.A.

Attachment C – PM_{2.5} Emissions Compliance Sheet

Armor Lite Trailer Manufacturing LLC
 Scott County, S3, T26N, R14W
 Project Number: 2012-12-037
 Installation ID Number: 201-0128
 Permit Number: _____

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

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Month, Year	Process	Amount	Emission Factor	Monthly Emissions (tons)	Monthly Emissions from Previous Year (tons)	Previous 12 Month Emission Total (tons)	Current 12 Month Emission Total (tons)
EX: July 2013	Welding (lb wire)	1,000	0.0052	0.59	1.0	8.0	7.59
	Hand Cutting (hr)	100	3.04				
	Plasma Cutting (hr)	100	0.40				
	Abrasive Blasting (lb medium)	1,000	0.00069				
	Heater (MMCF)	1.0	7.6				
	Coating (tons)	0.415	N/A				
	Welding (lb wire)		0.0052				
	Hand Cutting (hr)		3.04				
	Plasma Cutting (hr)		0.40				
	Abrasive Blasting (lb medium)		0.00069				
	Heater (MMCF)		7.6				
	Coating (tons)		N/A				
	Welding (lb wire)		0.0052				
	Hand Cutting (hr)		3.04				
	Plasma Cutting (hr)		0.40				
	Abrasive Blasting (lb medium)		0.00069				
	Heater (MMCF)		7.6				
	Coating (tons)		N/A				
	Welding (lb wire)		0.0052				
	Hand Cutting (hr)		3.04				
	Plasma Cutting (hr)		0.40				
	Abrasive Blasting (lb medium)		0.00069				
	Heater (MMCF)		7.6				
	Coating (tons)		N/A				

- a) Record the date
- b) Each process that emits PM_{2.5}
- c) Record the amount of each process for the entire month (units for each process are in parenthesis)
- d) Process specific emission factor.
- e) Calculate using the following equation: $(e) = (c)_{\text{weld}} * (d)_{\text{weld}}/2000 + (c)_{\text{hand cut}} * (d)_{\text{hand cut}}/2000 + (c)_{\text{plasma cut}} * (d)_{\text{plasma cut}}/2000 + (c)_{\text{blasting}} * (d)_{\text{blasting}}/2000 + (c)_{\text{heater}} * (d)_{\text{heater}}/2000 + (c)_{\text{coating}}$
- f) Record the emissions from this month last year: $(e)_{\text{this month last year}}$
- g) Record the 12-month total from last month: $(h)_{\text{last month}}$
- h) Calculate using the following equation: $(h) = (e) - (f) + (g)$

A total less than **10.0** tons of PM_{2.5} implies compliance with Special Condition 2.A.

Attachment D – Alternative Coating Compliance Sheet

Armor Lite Trailer Manufacturing LLC
 Scott County, S3, T26N, R14W
 Project Number: 2012-12-037
 Installation ID Number: 201-0128
 Permit Number: _____

Coating Name: _____ Date: _____ Copy this sheet as needed.

A	B	C	D	E	F	G	H	I	J
Individual HAP Name and CAS No.	HAP is also PM (yes / no)	Individual HAP Content (max weight %)	Maximum Application Rate (lbs coating per hour)	Overall PM Control Efficiency (%)	Individual HAP PTE (lbs/hr)	Individual HAP PTE (tons per year)	Individual HAP SMAL (tons per year)	Coating VOC (weight %)	Coating VOC PTE (tons per year)
<i>Benzene 71-43-2</i>	<i>no</i>	<i>2.0%</i>	<i>1.587</i>	<i>N/A</i>	<i>0.032</i>	<i>0.14</i>	<i>2.0</i>	<i>36.61%</i>	<i>2.54</i>
<i>Cobalt 2-Ethylhexanoate 136-52-7</i>	<i>yes</i>	<i>0.5%</i>		<i>97.5%</i>	<i>0.0002</i>	<i>0.00087</i>	<i>0.1</i>		

- A. Record the all individual HAPs from this single coating MSDS.
- B. Compare the HAP to Appendix B for verification as particulate matter.
- C. Record the maximum weight percent of each HAP from the MSDS.
- D. Record the maximum application rate with units of lbs of coating per hour.
- E. The overall PM control efficiency includes the air atomized spray gun transfer efficiency (50%), booth capture efficiency (100%), and exhaust filter control efficiency (95%): $50\% + (1 - 50\%) \times 100\% \times 95\% = 97.5\%$
- F. Calculate the particulate matter HAP potential to emit: $F = C \times D \times (1 - E)$. Otherwise calculate the volatile HAP potential to emit: $F = C \times D$.
- G. Calculate the Individual HAP PTE (tons per year): $G = F \times 8760 / 2000$.
- H. Record the individual HAP SMAL from the most recent Appendix B, also available at <http://dnr.mo.gov/env/apcp/docs/cp-hapsmaltbl6.pdf> as *Table of Hazardous Air Pollutants, Screening Model Action Levels*. Seek approval from the Air Pollution Control Program New Source Review Unit before using this coating if the individual HAP potential to emit is greater than the SMAL.
- I. Record or calculate the coating's VOC weight % from the MSDS. Verify VOC status according to 10 CSR 10-6.020 *Definitions and Common Reference Tables (2)(V)13*.
- J. Calculate the VOC potential to emit: $J = D \times I \times 8,760 / 2,000$. Seek approval from the Air Pollution Control Program New Source Review Unit before using this coating If the VOC potential to emit is greater than 130.44 tons per year.

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	
CFR	Code of Federal Regulations	National Emissions Standards for Hazardous Air Pollutants
CO	carbon monoxide	NO_x	nitrogen oxides
CO₂	carbon dioxide	NSPS	New Source Performance Standards
CO_{2e}	carbon dioxide equivalent	NSR	New Source Review
COMS	Continuous Opacity Monitoring System	PM	particulate matter
CSR	Code of State Regulations	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
dscf	dry standard cubic feet	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
EQ	Emission Inventory Questionnaire	ppm	parts per million
EP	Emission Point	PSD	Prevention of Significant Deterioration
EPA	Environmental Protection Agency	PTE	potential to emit
EU	Emission Unit	RACT	Reasonable Available Control Technology
fps	feet per second	RAL	Risk Assessment Level
ft	feet	SCC	Source Classification Code
GACT	Generally Available Control Technology	scfm	standard cubic feet per minute
GHG	Greenhouse Gas	SIC	Standard Industrial Classification
gpm	gallons per minute	SIP	State Implementation Plan
gr	grains	SMAL	Screening Model Action Levels
GWP	Global Warming Potential	SO_x	sulfur oxides
HAP	Hazardous Air Pollutant	SO₂	sulfur dioxide
hr	hour	tph	tons per hour
hp	horsepower	tpy	tons per year
lb	pound	VMT	vehicle miles traveled
lbs/hr	pounds per hour	VOC	Volatile Organic Compound
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		

APPENDIX B: Table of Hazardous Air Pollutants and Screening Model Action Levels (May 3, 2012 Revision 10)

Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM
ACETALDEHYDE	75-07-0	9		Y	N	CARBARYL	63-25-2	10	V	Y	Y	DICHLOROPROPANE, [1,2-]	78-87-5	1		Y	N
ACETAMIDE	60-35-5	1		Y	N	CARBON DISULFIDE	75-15-0	1		Y	N	DICHLOROPROPENE, [1,3-]	542-75-6	1		Y	N
ACETONITRILE	75-05-8	4		Y	N	CARBON TETRACHLORIDE	56-23-5	1		Y	N	DICHLORVOS	62-73-7	0.2		Y	N
ACETOPHENONE	98-86-2	1		Y	N	CARBONYL SULFIDE	463-58-1	5		Y	N	DIETHANOLAMINE	111-42-2	5		Y	N
ACETYLAMINOFLUORINE, [2-]	53-96-3	0.005	V	Y	Y	CATECHOL	120-80-9	5		Y	N	DIETHYL SULFATE	64-67-5	1		Y	N
ACROLEIN	107-02-8	0.04		Y	N	CHLORAMBEN	133-90-4	1		Y	Y	DIETHYLENE GLYCOL MONOBUTYL ETHER	112-34-5	5	P	Y	N
ACRYLAMIDE	79-06-1	0.02		Y	N	CHLORDANE	57-74-9	0.01		Y	Y	DIMETHOXYBENZIDINE, [3,3-]	119-90-4	0.1	V	Y	Y
ACRYLIC ACID	79-10-7	0.6		Y	N	CHLORINE	7782-50-5	0.1		N	N	DIMETHYL BENZIDINE, [3,3-]	119-93-7	0.008	V	Y	Y
ACRYLONITRILE	107-13-1	0.3		Y	N	CHLOROACETIC ACID	79-11-8	0.1		Y	N	DIMETHYL CARBAMOYL CHLORIDE	79-44-7	0.02		Y	N
ALLYL CHLORIDE	107-05-1	1		Y	N	CHLOROACETOPHENONE, [2-]	532-27-4	0.06		Y	N	DIMETHYL FORMAMIDE	68-12-2	1		Y	N
AMNOBIPHENYL, [4-]	92-67-1	1	V	Y	N	CHLOROBENZENE	108-90-7	10		Y	N	DIMETHYL HYDRAZINE, [1,1-]	57-14-7	0.008		Y	N
ANILINE	62-53-3	1		Y	N	CHLOROBENZILATE	510-15-6	0.4	V	Y	Y	DIMETHYL PHTHALATE	131-11-3	10		Y	N
ANISIDINE, [ORTHO-]	90-04-0	1		Y	N	CHLOROFORM	67-66-3	0.9		Y	N	DIMETHYL SULFATE	77-78-1	0.1		Y	N
ANTHRACENE	120-12-7	0.01	V	Y	N	CHLOROMETHYL METHYL ETHER	107-30-2	0.1		Y	N	DIMETHYLAMNOAZOBENZENE, [4-]	60-11-7	1		Y	N
ANTIMONY COMPOUNDS		5	H	N	Y	CHLOROPRENE	126-99-8	1		Y	N	DIMETHYLANILINE, [N-N-]	121-69-7	1		Y	N
ANTIMONY PENTAFLUORIDE	7783-70-2	0.1	H	N	Y	CHROMIUM (VI) COMPOUNDS		0.002	L	N	Y	DINITRO-O-CRESOL, [4,6-] (Note 6)	534-52-1	0.1	E	Y	Y
ANTIMONY POTASSIUM TARTRATE	28300-74-5	1	H	N	Y	CHROMIUM COMPOUNDS		5	L	N	Y	DINITROPHENOL, [2,4-]	51-28-5	1		Y	N
ANTIMONY TRIOXIDE	1309-64-4	1	H	N	Y	CHRYSENE	218-01-9	0.01	V	Y	N	DINITROTOLUENE, [2,4-]	121-14-2	0.02		Y	N
ANTIMONY TRISULFIDE	1345-04-6	0.1	H	N	Y	COBALT COMPOUNDS		0.1	M	N	Y	DIOXANE, [1,4-]	123-91-1	6		Y	N
ARSENIC COMPOUNDS		0.005	I	N	Y	COKE OVEN EMISSIONS	8007-45-2	0.03	N	Y	N	DIPHENYLHYDRAZINE, [1,2-]	122-66-7	0.09	V	Y	Y
ASBESTOS	1332-21-4	0	A	N	Y	CRESOL, [META-]	108-39-4	1	B	Y	N	DIPHENYLMETHANE DIISOCYANATE, [4,4-]	101-68-8	0.1	V	Y	N
BENZ(A)ANTHRACENE	56-55-3	0.01	V	Y	N	CRESOL, [ORTHO-]	95-48-7	1	B	Y	N	EPICHLOROHYDRIN	106-89-8	2		Y	N
BENZENE	71-43-2	2		Y	N	CRESOL, [PARA-]	106-44-5	1	B	Y	N	ETHOXYETHANOL, [2-]	110-80-5	10	P	Y	N
BENZIDINE	92-87-5	0.0003	V	Y	N	CRESOLS (MKED ISOMERS)	1319-77-3	1	B	Y	N	ETHOXYETHYL ACETATE, [2-]	111-15-9	5	P	Y	N
BENZO(A)PYRENE	50-32-8	0.01	V	Y	N	CUMENE	98-82-8	10		Y	N	ETHYL ACRYLATE	140-88-5	1		Y	N
BENZO(B)FLUORANTHENE	205-99-2	0.01	V	Y	N	CYANIDE COMPOUNDS		0.1	O	Y	N	ETHYL BENZENE	100-41-4	10		Y	N
BENZO(K)FLUORANTHENE	207-08-9	0.01	V	Y	N	DDE	72-55-9	0.01	V	Y	Y	ETHYL CHLORIDE	75-00-3	10		Y	N
BENZOTRICHLORIDE	98-07-7	0.006		Y	N	DI(2-ETHYLHEXYL) PHTHALATE, (DEHP)	117-81-7	5		Y	N	ETHYLENE GLYCOL	107-21-1	10		Y	N
BENZYL CHLORIDE	100-44-7	0.1		Y	N	DIAMINOTOLUENE, [2,4-]	95-80-7	0.02		Y	N	ETHYLENE GLYCOL MONOBUTYL ETHER (Delisted)	111-76-2				
BERYLLIUM COMPOUNDS		0.008	J	N	Y	DIAZOMETHANE	334-88-3	1		Y	N	ETHYLENE GLYCOL MONOHEXYL ETHER	112-25-4	5	P	Y	N
BERYLLIUM SALTS		2E-05	J	N	Y	DIBENZ(A,H)ANTHRACENE	53-70-3	0.01	V	Y	N	ETHYLENE IMINE [AZIRIDINE]	151-56-4	0.003		Y	N
BIPHENYL, [1,1-]	92-52-4	10	V	Y	N	DIOXINS/FURANS		6E-07	D,V	Y	N	ETHYLENE OXIDE	75-21-8	0.1		Y	N
BIS(CHLOROETHYL)ETHER	111-44-4	0.06		Y	N	DIBENZOFURAN	132-64-9	5	V	Y	N	ETHYLENE THIOUREA	96-45-7	0.6		Y	Y
BIS(CHLOROMETHYL)ETHER	542-88-1	0.0003		Y	N	DIBROMO-3-CHLOROPROPANE, [1,2-]	96-12-8	0.01		Y	N	FORMALDEHYDE	50-00-0	2		Y	N
BROMOFORM	75-25-2	10		Y	N	DIBROMOETHANE, [1,2-]	106-93-4	0.1		Y	N	GLYCOL ETHER (ETHYLENE GLYCOL ETHERS)		5	P	Y	N
BROMOMETHANE	74-83-9	10		Y	N	DIBUTYL PHTHALATE	84-74-2	10		Y	Y	GLYCOL ETHER (DIETHYLENE GLYCOL ETHERS)		5	P	Y	N
BUTADIENE, [1,3-]	106-99-0	0.07		Y	N	DICHLOROBENZENE, [1,4-]	106-46-7	3		Y	N	HEPTACHLOR	76-44-8	0.02		Y	N
BUTOXYETHANOL ACETATE, [2-]	112-07-2	5	P	Y	N	DICHLOROBENZIDENE, [3,3-]	91-94-1	0.2	V	Y	Y	HEXACHLOROBENZENE	118-74-1	0.01		Y	N
BUTYLENE OXIDE, [1,2-]	106-88-7	1		Y	N	DICHLOROETHANE, [1,1-]	75-34-3	1		Y	N	HEXACHLOROBUTADIENE	87-68-3	0.9		Y	N
CADMIUM COMPOUNDS		0.01	K	N	Y	DICHLOROETHANE, [1,2-]	107-06-2	0.8		Y	N	HEXACHLOROCYCLOHEXANE, [ALPHA-]	319-84-6	0.01	F	Y	N
CALCIUM CYANAMIDE	156-62-7	10		Y	Y	DICHLOROETHYLENE, [1,1-]	75-35-4	0.4		Y	N	HEXACHLOROCYCLOHEXANE, [BETA-]	319-85-7	0.01	F	Y	N
CAPROLACTAM (Delisted)	105-60-2					DICHLOROMETHANE	75-09-2	10		N	N	HEXACHLOROCYCLOHEXANE, [DELTA-]	319-86-8	0.01	F	Y	N
CAPTAN	133-06-2	10		Y	Y	DICHLOROPHENOXY ACETIC ACID, [2,4-]	94-75-7	10	C	Y	Y	HEXACHLOROCYCLOHEXANE, [TECHNICAL]	608-73-1	0.01	F	Y	N

APPENDIX B: Table of Hazardous Air Pollutants and Screening Model Action Levels (May 3, 2012 Revision 10)

Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM
HEXACHLOROCYCLOPENTADIENE	77-47-4	0.1		Y	N	NITROSODIMETHYLAMINE, [N-]	62-75-9	0.001		Y	N	TRIMETHYLPENTANE, [2,2,4-]	540-84-1	5		Y	N
HEXACHLOROETHANE	67-72-1	5		Y	N	NITROSOMORPHOLINE, [N-]	59-89-2	1		Y	N	URETHANE [ETHYL CARBAMATE]	51-79-6	0.8		Y	N
HEXAMETHYLENE,-1,6-DIISOCYANATE	822-06-0	0.02		Y	N	NITROSO-N-METHYLUREA, [N-]	684-93-5	0.0002		Y	N	VINYL ACETATE	108-05-4	1		Y	N
HEXAMETHYLPHOSPHORAMIDE	680-31-9	0.01		Y	N	OCTACHLORONAPHTHALENE	2234-13-1	0.01	V	Y	N	VINYL BROMIDE	593-60-2	0.6		Y	N
HEXANE, [N-]	110-54-3	10		Y	N	PARATHION	56-38-2	0.1		Y	Y	VINYL CHLORIDE	75-01-4	0.2		Y	N
HYDRAZINE	302-01-2	0.004		N	N	PCB [POLYCHLORINATED BIPHENYLS]	1336-36-3	0.009	X	Y	Y	XYLENE, [META-]	108-38-3	10	G	Y	N
HYDROGEN CHLORIDE	7647-01-0	10		N	N	PENTACHLORONITROBENZENE	82-68-8	0.3		Y	N	XYLENE, [ORTHO-]	95-47-6	10	G	Y	N
HYDROGEN FLUORIDE	7664-39-3	0.1		N	N	PENTACHLOROPHENOL	87-86-5	0.7		Y	N	XYLENE, [PARA-]	106-42-3	10	G	Y	N
HYDROQUINONE	123-31-9	1		Y	N	PHENOL	108-95-2	0.1		Y	N	XYLENES (MIXED ISOMERS)	1330-20-7	10	G	Y	N
INDENO(1,2,3CD)PYRENE	193-39-5	0.01	V	Y	N	PHENYLENEDIAMINE, [PARA-]	106-50-3	10		Y	N						
ISOPHORONE	78-59-1	10		Y	N	PHOSGENE	75-44-5	0.1		Y	N						
LEAD COMPOUNDS		0.01	Q	N	Y	PHOSPHINE	7803-51-2	5		N	N						
LINDANE [GAMMA-HEXACHLOROCYCLOHEXANE]	58-89-9	0.01	F	Y	N	PHOSPHOROUS (YELLOW OR WHITE)	7723-14-0	0.1		N	N	Legend					
MALEIC ANHYDRIDE	108-31-6	1		Y	N	PTHALIC ANHYDRIDE	85-44-9	5		Y	N	Group ID	Aggregate Group Name				
MANGANESE COMPOUNDS		0.8	R	N	Y	POLYCYLIC ORGANIC MATTER		0.01	V	Y	N	A	Asbestos				
MERCURY COMPOUNDS		0.01	S	N	N	PROPANE SULTONE, [1,3-]	1120-71-4	0.03		Y	Y	B	Cresols/Cresylic Acid (isomers and mixtures)				
METHANOL	67-56-1	10		Y	N	PROPIOLACTONE, [BETA-]	57-57-8	0.1		Y	N	C	2,4 - D, Salts and Esters				
METHOXYCHLOR	72-43-5	10	V	Y	Y	PROPIONALDEHYDE	123-38-6	5		Y	N	D	Dibenzofurans, Dibenzodioxins				
METHOXYETHANOL, [2-]	109-86-4	10	P	Y	N	PROPOXUR [BAYGON]	114-26-1	10		Y	Y	E	4, 6 Dinitro-o-cresol, and Salts				
METHYL CHLORIDE	74-87-3	10		Y	N	PROPYLENE OXIDE	75-56-9	5		Y	N	F	Lindane (all isomers)				
METHYL ETHYL KETONE (Delisted)	78-93-3					PROPYLENEIMINE, [1,2-]	75-55-8	0.003		Y	N	G	Xylenes (all isomers and mixtures)				
METHYL HYDRAZINE	60-34-4	0.06		Y	N	QUINOLINE	91-22-5	0.006		Y	N	H	Antimony Compounds				
METHYL IODIDE	74-88-4	1		Y	N	QUINONE	106-51-4	5		Y	N	I	Arsenic Compounds				
METHYL ISOBUTYL KETONE	108-10-1	10		Y	N	RADIONUCLIDES		Note 1	Y	N	Y	J	Beryllium Compounds				
METHYL ISOCYANATE	624-83-9	0.1		Y	N	SELENIUM COMPOUNDS		0.1	W	N	Y	K	Cadmium Compounds				
METHYL METHACRYLATE	80-62-6	10		Y	N	STYRENE	100-42-5	1		Y	N	L	Chromium Compounds				
METHYL TERT-BUTYL ETHER	1634-04-4	10		Y	N	STYRENE OXIDE	96-09-3	1		Y	N	M	Cobalt Compounds				
METHYLCYCLOPENTADIENYL MANGANESE	12108-13-3	0.1	R	N	Y	TETRACHLORODIBENZO-P-DIOXIN,[2,3,7,8]	1746-01-6	6E-07	D,V	Y	Y	N	Coke Oven Emissions				
METHYLENE BIS(2-CHLOROANILINE), [4,4-]	101-14-4	0.2	V	Y	Y	TETRACHLOROETHANE, [1,1,2,2-]	79-34-5	0.3		Y	N	O	Cyanide Compounds				
METHYLENEDIANILINE, [4,4-]	101-77-9	1	V	Y	N	TETRACHLOROETHYLENE	127-18-4	10		N	N	P	Glycol Ethers				
METHYLNAPHTHALENE, [2-]	91-57-6	0.01	V	Y	N	TITANIUM TETRACHLORIDE	7550-45-0	0.1		N	N	Q	Lead Compounds (except elemental Lead)				
MINERAL FIBERS		0	T	N	Y	TOLUENE	108-88-3	10		Y	N	R	Manganese Compounds				
NAPHTHALENE	91-20-3	10	V	Y	N	TOLUENE DIISOCYANATE, [2,4-]	584-84-9	0.1		Y	N	S	Mercury Compounds				
NAPHTHYLAMINE, [ALPHA-]	134-32-7	0.01	V	Y	N	TOLUIDINE, [ORTHO-]	95-53-4	4		Y	N	T	Fine Mineral Fibers				
NAPHTHYLAMINE, [BETA-]	91-59-8	0.01	V	Y	N	TOXAPHENE	8001-35-2	0.01		Y	N	U	Nickel Compounds				
NICKEL CARBONYL	13463-39-3	0.1	U	N	Y	TRICHLOROENZENE, [1,2,4-]	120-82-1	10		Y	N	V	Polycyclic Organic Matter				
NICKEL COMPOUNDS		1	U	N	Y	TRICHLOROETHANE, [1,1,1-]	71-55-6	10		N	N	W	Selenium Compounds				
NICKEL REFINERY DUST		0.08	U	N	Y	TRICHLOROETHANE, [1,1,2-]	79-00-5	1		Y	N	X	Polychlorinated Biphenyls (Aroclors)				
NICKEL SUBSULFIDE	12035-72-2	0.04	U	N	Y	TRICHLOROETHYLENE	79-01-6	10		Y	N	Y	Radionuclides				
NITROBENZENE	98-95-3	1		Y	N	TRICHLOROPHENOL, [2,4,5-]	95-95-4	1		Y	N						
NITROBIPHENYL, [4-]	92-93-3	1	V	Y	N	TRICHLOROPHENOL, [2,4,6-]	88-06-2	6		Y	N						
NITROPHENOL, [4-]	100-02-7	5		Y	N	TRIETHYLAMINE	121-44-8	10		Y	N	Note 1	The SMAL for radionuclides is defined as the effective dose equivalent to 0.3 millirems per year for 7 years exposure associated with a cancer risk of 1 in 1 million				
NITROPROPANE, [2-]	79-46-9	1		Y	N	TRIFLURALIN	1582-09-8	9		Y	Y						

Mr. Wesley Graviett
Treasurer
Armor Lite Trailer Manufacturing LLC
1190 State Highway H
Sikeston, MO 63801

RE: New Source Review Permit - Project Number: 2012-12-037

Dear Mr. Graviett:

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, 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 J Luebbert, at the Department of Natural Resources' 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

Susan Heckenkamp
New Source Review Unit Chief

SH:jl

Enclosures

c: Southeast Regional Office
PAMS File: 2012-12-037

Permit Number: