Permit by Rule (PBR) Registration
Technical Review

Company:	Siddons Martin Emergency Group, LLC	**Registration No.:**	177434
Nearest City:	Brookshire	**Project No.:**	379631
County:	Waller	**Project Type:**	Initial
Project Reviewer:	Jana Banigo	**Regulated Entity No.:**	RN112040233
Unit Name:	Siddons Martin Emergency Group	**Customer Reference No.:**	CN605939529
PBR No(s).:	106.433, 106.436	**Project Received Date:**	September 5, 2024
Physical Location:	2671 FM 359 Rd S		

Project Overview / Process Description

Siddons Martin Emergency Group, LLC (SMEG) owns and operates an Aircraft Rescue and Fire Fighting (ARFF) and fire truck vehicles repair, restoration, and refinishing facility in Brookshire, Waller County, Texas. The facility services Aircraft Rescue and Fire Fighting (ARFF) vehicles and more traditional fire trucks on a regular basis.

Vehicles services offered may vary from simple body panel repairs and refinishing to frame straightening to full frame-off restorations. Activities necessary to complete these repairs may involve welding (claimed under 106.227), abrasive cutting and grinding (claimed under 106.265), handheld oxygen-acetylene ("oxy") and plasma torch cutting (claimed under 106.265), various fluid changes (claimed under 106.263), manually applied fiberglass body panel repair {claimed under 106.392 (3D)}, and equipment utilized for the mechanical pressing or bending of metal (claimed under PBR 106.317).

Fiberglass repair involves grinding out or V-notching damaged fiberglass panel or areas to accept new fiberglass matting. The matting is secured in-place with fiberglass resin. Once dry, the area is sanded smooth using sanding blocks, sandpaper, and handheld abrasive tools (claimed under 106.265). Additional filler materials may be used to prepare the repaired panel or area for refinishing.

During vehicle repairs, SMEG uses a remote reservoir parts washer {as described in 106.436 (9)(A)} to remove dirt and grease off of individual parts removed from a vehicle before they are reinstalled. After manually washing in the sink of the degreaser, the part is left to drain within the parts washer. Sandblasting of parts that require such surface preparation is performed within a modular, self-contained blasting cabinet {claimed under 106.452 (1)}.

A 6.50-horsepower (hp) gasoline engine-powered pressure washer is utilized to removed surface-level contamination on and thereby prepare vehicles and panels for refinishing (claimed under 106.511). The wash stream either only contains water or uses aqueous detergents, surfactants, and other cleaning solutions containing no more than one percent of any organic compound by weight or containing not more than five percent of any organic compound with a vapor pressure less than 0.002 psia.
Once any required maintenance is performed, the trucks or panels are then transported to the paint booth (EPNs: COAT-1) for recoating if needed.

Primer and topcoat paints, as applicable for the specific job, are mixed/thinned within the paint booth (EPNs: COAT-01), while the booth is operational. The coating is applied to the vehicles or individual body panels using high-pressure, low-volume (HVLP) spray equipment. Once the coating has been applied, the paint is allowed to dry on the equipment while the booth is operational. Once the vehicle or panel is fully cured, they are removed from the booth. Wet-sanding (handheld) and the use of polishing or rubbing/cutting compound may be applied to refinished vehicles and panels to correct for any surface imperfections from refinishing prior to final delivery to the customer.

Spray equipment is cleaned by manually applying clean-up solvents via rags or wipes or spraying the solvent through the equipment into a solvent recycling drum which is disposed by a waste vendor (EPNs: COAT-01). Spray-through clean-up activities occur within the paint booth while exhaust is fully operational.

The facility proposes to have one (1) 3.0-MMBtu/hr liquid petroleum-fired (LPG) paint booth heater that vents through a separate roof penetration stack (EPN: HTR-01). A detailed process description is located in the file.

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SMEG submitted an application to authorize emissions associated with coating, repairing, restoring, and refinishing fire truck vehicles. The operations will also consist of various metal modification, manually applied fiberglass repair activities, and vehicle reassembly efforts.

The operations are being authorized under 106.433 (for surface coating of misc. metal parts) 106.436 for autobody coating operations. The company indicates that the coating emissions will be evenly distributed across two stacks. The emissions from the LPG fired heater will be routed through an additional stack (EPN HTR-01).

Claimed Rules

106.227 – Welding operations
106.263 – MSS activities required for routine maintenance
106.265 – Handheld plasma torch cutting, abrasive cutting and grinding, handheld sanding and polishing equipment
106.317 - Equipment utilized for the mechanical pressing or bending of metal
106.392 – The annual resin (fiberglass) usage is less 3,000 lbs/yr therefore the facility is exempt from all other requirements except for record keeping. RE will comply with this condition by meeting the conditions of 1(B). Records of resin (acetone is not used) will be kept on a monthly and calendar year-to-date basis to show compliance with this section and will be maintained for the most recent 24 months.
106.452(1) – Enclosed abrasive cleaning
106.511 – Portable engine (portable pressure washer)

Compliance for PBR's 106.4, 106.433(6), 106.436, Chapter 115, emission calculations, and other supporting documentation can be found in the public file.

Permit by Rule Requirements - 30 TAC Chapter 106

General Requirements	
Registration Fee Reference No.:	**Application fee: 2079 / 582EA000622915**
Is this registration certified?	**No**
Is planned MSS included in the registration?	**No**
Are there affected NSR or Title V authorizations for the project?	**No**
Are there any upstream or downstream affects associated with this registration?	**No**
Are associated upstream/downstream emissions either included in the registration OR within current permitted limits with no changes to underlying air authorizations for the applicable units regarding BACT, health and environmental impacts, or other representations.	**NA**
Are emissions for each PBR authorized facility less than the § 106.4(a)(1) limits?	**Yes**
Are total emissions from all sitewide PBR authorized facilities less than the §106.4(a)(4) limits, OR has the site been subject to public notice requirements?	**Yes**
Are there permit limits on using PBRs at the site?	**No**
Is the facility subject to the NO_X Mass Cap and Trade Program?	**No**
Is the facility in compliance with all other applicable rules and regulations?	**Yes**
Notes:	

Federal Applicability	
Does this project trigger a PSD or Nonattainment review?	**No**
Does the Major NSR applicability analysis include all associated upstream and/or downstream emissions?	**NA**
Are there any applicable standards under NSPS, NESHAP, or NESHAP for source categories (MACT)?	**Yes**
If yes, list applicable subparts: MACT 6X	
Notes:	

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Permit by Rule Requirements - Compliance Demonstrations

PBR 106.433 Surface Coating Facility

(1) Metalizing (spraying molten metal onto a surface to form a coating) will not be performed at the site.
(2) RE indicates that all facilities covered by this section at the site will implement good housekeeping procedures to minimize fugitive emissions as required in subparagraphs (A-C) of this paragraph.
(3) A non-electric heater will be used to dry parts inside of the enclosed booth:
(A) The heater has a maximum heat input of 3.0- MMBtu/hr
(B) The heat will be provided by the combustion of liquid petroleum gas.
(4) RE indicates that no add-on controls will be used to meet the emission limits of this section. The total uncontrolled emissions from the coating materials (as applied) and cleanup solvents will not exceed the following for all operations:
(A) The total annual VOC emission rate is < 25 tpy (**Actual: 1.15 tpy**). The total annual exempt solvent emission rate is < 10 tpy (**Actual: 0.64 tpy**).
(B) The total hourly VOC emission rate is <30 lb/hr (**Actual: 7.70 lb/hr**). The total hourly exempt solvent emission rate is <5.0 lb/hr (**Actual: 4.25 lb/hr**).
(C) The emissions are greater than 0.25 lb/hr of VOC and/or exempt solvents, therefore the facility must meet paragraphs (5)-(9) of this section.
(5) Opacity of visible emissions will not exceed 5.0% as determined by EPA Method 9.
(6) All surface coating operations will be performed an enclosed paint booths:
(A) No more than six lb/hr of VOC emissions, averaged over any five-hour period and 500 pounds/week per booth or enclosed work area. (**Actual: 5.84 lb/hr and 346.24 lb/week**)
(C) A minimum face velocity at the intake opening of each booth or work area is 100 ft/min (**Actual: 124.08 ft/min**). Emissions will be exhausted through elevated stacks that extend at least 1.5 times the building height above ground level. (**Actual: Building height 25 ft x 1.5 = 37.5 ft).** All stacks will discharge vertically; rain protection will not restrict or Obstruct vertical flow.
(C) Spraying operations, emissions of particulate matter will be controlled using a dry filter system with a 95% removal efficiency as documented by the manufacturer. (**Actual: 98.66%)** The face velocity at the filter will not exceed 250 ft/min or that specified by the filter manufacturer, whichever is less. (**Actual: 105 ft/min**). Filters will be replaced whenever the pressure drop across the filter no longer meets the manufacture's recommendation.
(7) NA – Coating activities will be performed in an enclosed paint booth.
(8) RE indicates that records indicated in subparagraphs (A-D) will be maintained at the plant site for the most recent 24 months and be made immediately available to the commission or any pollution control agency with jurisdiction.
(9) RE submitted a PI-7.

PBR 106.436 Auto Body Refinishing Facility

Body repair and refinishing of motorcycle, passenger car, van, light truck and heavy truck and other vehicle body parts, bodies, and cabs is permitted by rule, provided that all the following conditions of this section are met.
(1) RE submitted a PI-7.
(2) RE prefers to register the emissions under 106.436.
(3) Good housekeeping will be maintained surface coating operation. Spills are cleaned up as soon as possible, equipment is maintained according to manufacturers' instructions, and property is kept clean. In addition, all waste coatings, solvents, and spent automotive fluids including, but not limited to, engine oil, gear oil, transmission fluid, brake fluid, anti-freeze, fresh or waste fuels, and spray booth filters or water wash sludge is disposed of properly. Prior to disposal, all liquid waste will be stored in covered containers.
(4) There are no visible emissions leaving this operation.
(5) All spray coating operations that coat more than nine square feet (one panel) are performed in a totally enclosed, filtered spray booth with an air intake area of < 100 ft^2 (**Actual: < 100 ft^2**). All spray areas are equipped with a fan that achieves:
(A) A flow capacity of at least 10,000 ft3 (**Actual: > 10,000 ft^3**)
(B) A face velocity of at least 100 ft/min (**Actual: > 100 ft/min**)
(6) N/A – Paint operations are performed in a totally enclosed paint booth.
(7) The paint booth exhaust filters have a particulate control efficiency of **>95 %** thereby, meeting the required 90% efficiency.
(8) High volume low pressure (HVLP) spray guns are used for all surface coating operations
(9) Cleanup emissions shall be minimized by implementing the following procedures:

(A) Spray and other equipment cleanup is totally enclosed during washing, rinsing, and draining.
(B) Wash solvents are kept in an enclosed reservoir that is covered at all times, except when being refilled with fresh solvents.
(C) Waste solvents and other cleaning materials are kept in closed containers.

(10) The non-electric heater is used to dry coated parts are fired with LPG gas.

(11) The spray booth stack height:
(A) N/A - There are no buildings within 200 ft of the shop building.
(B) The stack height is > 1 .2 times the height of the shop building (**Actual: 37.5 ft**)
(C) N/A - The ground level elevation is less than 250 ft of the shop building

(12) The spray booth area stacks are located at least 50 ft away from any residence, recreation, church, school, childcare facility, or medical or dental facility. (**Actual: 6,256.32 ft from the nearest offsite receptor**)

(13) N/A - The paint booth stack does not have any vertical discharge obstructions.

(14) The volatile organic compound (VOC) content of the coatings utilized meet the limits specified in 30 TAC 115.421 as applied.

(15) Coating types will not exceed the shop usage rates listed in paragraphs (A)-(H).

(16) RE indicates that records indicated in subparagraphs (A-E) will be maintained at the plant site for the most recent 24 months and be made immediately available to the commission or any pollution control agency with jurisdiction.

Notes: A detailed compliance demonstration is included in the public file.

Compliance History and Site Review

In accordance with 30 TAC Chapter 60, a compliance history report was reviewed on:			**September 25, 2024**
Site rating / classification:	**N/A**	Company rating / classification:	**Unclassified**
Has any action occurred on the basis of the compliance history or rating?			**No**
Did the Regional Office provide site approval and confirm distances?			**NA**

Emission Summary

EPN / Emission Source	VOC		NOx		CO		PM		PM_{10} / $PM_{2.5}$		SO_2		ES	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
COAT-1 / PB Stack 1	7.70	1.15	--	--	--	--	0.01	<0.01	0.01	<0.01			4.25	0.64
HTR-01 / PB Heater	0.03	0.04	0.43	0.50	0.25	0.29	0.02	0.03	0.02	0.03	<0.01	<0.01	--	--
TOTAL EMISSIONS (TPY):		**1.19**		**0.50**		**0.29**		**0.03**		**0.03**		**<0.01**		**0.64**

MAXIMUM OPERATING SCHEDULE:	**Hours/Day**		**Days/Week**		**Weeks/Year**		**Hours/Year**	2,340

Note$_1$: For conservative purposes, SMEG represents that HAP's are equal to VOC's.

Jana Banigo — October 8, 2024
Ms. Jana Banigo
Permit Reviewer
Rule Registration Section
Date

Michael Partee — October 9, 2024
Michael Partee, Manager
Rule Registrations Section
Air Permits Division
Section Manager
Date