

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

CHAPTER 2 TECHNICAL MEMORANDUM

TO: File

THROUGH: Stephen S. Ours, P.E. *SSO*
Chief, Permitting Branch

FROM: Olivia Achuko *SSO For OA*
Environmental Engineer

SUBJECT: **USA Motors Inc**
Permit No. 6578-R1
Permit to Operate an Automotive Paint Spray Booth at 45 Q Street SW

DATE: December 12, 2017

BACKGROUND INFORMATION

A permit application to operate an existing paint spray booth at the USA Motors Inc facility, located at 45 Q Street SW, Washington DC 20024, was received by the Air Quality Division (AQD) on May 21, 2015. A revised application was received June 2, 2016, following the revision of the air quality regulation pertaining to motor vehicle and mobile equipment non-assembly line coating operations. The application is to continue operation of a previously permitted Ameri-cure Inc. semi-down draft unit, model SDD25149 paint booth. The facility previously had a permit (#6578) that was issued on May 21, 2012, but has since expired.

In the June 2016 application, the stack height from the roof top was listed as 3 feet which did not meet the requirements of the new regulation found in 20 DCMR 718 but the applicant included a statement that promised to modify the height by August 2016. I recently contacted the facility to get a proof of the modification before the permit can be issued. After several failed attempt to get the facility to submit a proof of stack height adjustment, I called the manager, Mr. Abdul Shirar, on November 28, 2017 to get an update and he immediately asked for my email address and later sent the attached photograph of the new stack.

AQD has determined that the facility is an existing source under the District of Columbia's newly promulgated (final December 1, 2016) "Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations Regulations" (20 DCMR 718). The new regulation is applicable to both new and existing sources.

According to their application, this company has been in operation since May 1996 so pursuant to 20 DCMR 63.11171, the facility is considered an existing source with respect to 40 CFR 63, Subpart HHHHHH, National Emission Standards for Hazardous Air Pollutants: Paint Stripping

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and Miscellaneous Surface Coating Operations at Area Sources.

This permit action will be published in the DC Register on December 22, 2017. Public comments for the permit action will be solicited through January 22, 2018.

The applicant has not requested that any of the materials submitted with this application be held confidential.

TECHNICAL INFORMATION

The equipment at this site includes one semi-down draft paint spray booth, model SDD25149, that is used for full body auto painting, sanding, priming and other auto refinishing operations. There will be no use of methylene chloride (MeCl) at this facility. The company intends to use high volume low pressure (HVLP) spray guns as well as dip application. Guns are cleaned by several methods, consisting of a fully enclosed spray gun cleaning system that is kept closed when not in use, an unatomized discharge of cleaning solvent into a paint waste container that is kept closed when not in use, and disassembly of the spray gun and cleaning in a vat that is kept closed when not in use.

As noted above, at the time of submittal of the revised permit application, received May 26, 2016, the stack configuration did not comply with 20 DCMR 718.19 because the height of stack above the roof top was 3 feet instead of 5 feet. The revised design, submitted by email on November 28, 2017 corrects this deficiency (5.2 ft above roof). The stack extension has already been installed, based on the picture provided by the applicant.

This facility is an existing source under 40 CFR 63, as discussed above, therefore the compliance date for 40 CFR 63, Subpart HHHHHH was January 10, 2011.

It is difficult to accurately estimate emissions from an automotive paint spray booth due to the variations of coatings, job sizes, etc. that occur in a typical autobody paint shop. However, in order to determine a reasonable estimate for purposes of this evaluation, AQD referenced EPA's "Technical Support Document for Potential to Emit Guidance memo. Documentation of Emission Calculations" [Tim Smith, USEPA/OAQPS, April 1998]. Using an average VOC content of 3.5 pounds per gallon, this document estimates 4.8 pounds of VOCs could be emitted per average job. This document also estimates that a single paint booth could be used for no more than 25 jobs per week. Based on these estimates, AQD calculated potential emissions from the single paint booth of 3.12 tons per year of VOCs.

REGULATORY REVIEW

20 DCMR Chapter 2, Section 200: General Permit Requirements:

An automotive spray paint booth is a potential air pollution source because most auto body paints, coatings, and solvents contain volatile organic compounds that are emitted upon use. Thus a Chapter 2 permit is required.

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20 DCMR Chapter 6, Section 606: Visible Emissions

The visible emissions limitations of 20 DCMR 606 are applicable to this facility. Proper operation of the equipment would preclude any visible emissions from being emitted into the outdoor atmosphere from the operation of the paint/spray booth and other equipment at the facility. This more stringent requirement (required by 20 DCMR 201) is contained in Condition II(i).

20 DCMR Chapter 7: Volatile Organic Compound (VOC) Emissions Reduction

The requirements of 20 DCMR 700 were not included in the permit as they are not applicable when 20 DCMR 718 is applicable.

The facility is regulated under the newly revised 20 DCMR 718 which is the District's primary regulation for controlling air emissions from automotive painting operations. The requirements of this regulation have been included in the permit.

This memorandum will not cover all the detailed requirements of this regulation as they are extensive and make up the majority of the permit. However, highlights of the regulatory requirements include the following:

- Limits on allowable VOC content in coatings and solvents [Conditions II(b) and (c)];
- Limits on the coating methods and spray guns allowed [Conditions III(a) and (d) and related conditions];
- Emission point (stack) discharge height and exhaust velocity requirements [Condition III(c)] (primarily intended to reduce odor at ground level);
- Paint booth and filter specifications [Condition III(e)]; and
- Housekeeping and training requirements [Condition III(f)].

For all of these, appropriate monitoring, testing, and record keeping requirements have been included in the permit to ensure that compliance status can be determined.

20 DCMR Chapter 9, Section 903: Odorous or Other Nuisance Air Pollutants

"An emission into the atmosphere of odorous or other air pollutants from any source in any quantity and of any characteristic, and duration which is, or is likely to be injurious to the public health or welfare, or which interferes with the reasonable enjoyment of life or property is prohibited [20 DCMR 903.1]" is applicable to all sources. This requirement is contained in Condition II(h) of the permit. Many of the other conditions of the permit, especially many of those brought into the permit pursuant to 20 DCMR 718 are intended, at least in part, to reduce detectable odors. Should odors be problematic despite these requirements, Condition I(g), included in the permit pursuant to 20 DCMR 718.18, allows the Department to require the installation of additional control devices as necessary to ensure compliance.

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20 DCMR Chapter 14, Section 1409: Emission Standards for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

This regulation adopts 40 CFR 63, Subpart HHHHHH by reference. Please see the discussion of 40 CFR 63, Subpart HHHHHH below in "Other Regulations".

Other Regulations:

40 CFR 63, Subpart HHHHHH, "National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources" (also known as the "Auto Body NESHAP") is applicable to the facility. The rule applies to all motor vehicle and mobile equipment surface coating operations that paint with hazardous air pollutants (HAPs), including the collision repair industry. The compliance date for "existing" facilities such as this one was January 10, 2011. Many of the operational requirements of this regulation are similar to those of 20 DCMR 718. In some cases, 20 DCMR 718 references 40 CFR 63, Subpart HHHHHH.

To address the applicability of this regulation, it is indicated in the application that chemical paint strippers containing methylene chloride are not used at the site. Thus, the requirements for paint stripping are generally not applicable in this case. Condition II(a) of the permit was developed to ensure that no methylene chloride containing strippers are used at the facility.

The paint spray booth must meet the design requirements of 40 CFR 63.11173(e)(2)(ii). These requirements were included in the permit as Condition III(e)(3).

Condition III(e)(1) was written to allow the facility to use only exhaust filters with 98% or higher capture efficiency per 40 CFR 63.11173(e)(2)(i).

Condition III(a) of the permit was written to ensure compliance with the paint application technique specifications in both 20 DCMR 718.11 and 40 CFR 63.11173(e)(3). Similarly, the spray gun requirements of Condition III(d) were written to ensure compliance with 40 CFR 63.11173(e)(4) and 20 DCMR 718.15.

The training requirements of 40 CFR 63.11173(e)(1), (f), and (g) were included in the permit as Condition III(g).

All applicable record keeping requirements were included in Condition V of the permit. It should be noted that all records will be required to be kept for five years, rather than three per 20 DCMR 500.8, due to the more stringent five year requirement in 40 CFR 63.11178, the similar requirement in 20 DCMR 718.23, and the difficulty of having two different document retention policies for different sets of records.

The notification and reporting requirements of 40 CFR 63, Subpart HHHHHH are contained in Conditions VI(a) through (c).

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RECOMMENDATIONS

The application to operate the paint spray booth facility and the attached operating permit comply with all applicable federal and District air pollution control laws and regulations.

Public comments for the permit action will be solicited from December 22, 2017 through January 22, 2018. AQD will resolve any comments received before taking any final action on the permit. If no adverse comments are received, I recommend that permit No. 6578-R1 be issued in accordance with 20 DCMR 200.2 promptly upon the completion of the public review period.

SSO:NOA

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