

Greater Vancouver Regional District
Automotive Refinishing Emission Regulation Bylaw No. 1086, 2008

WHEREAS:

- A. The Greater Vancouver Regional District has enacted the Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008; and
- B. That Bylaw contemplates that the Board of the Greater Vancouver Regional District may establish emission regulations.

NOW THEREFORE the Board of Directors of the Greater Vancouver Regional District in open meeting duly assembled enacts as follows:

General

- 1 This Bylaw may be cited for all purposes as the “Greater Vancouver Regional District Automotive Refinishing Emission Regulation Bylaw No. 1086, 2008” (in this Bylaw, “this Emission Regulation”).
- 2 (1) This Emission Regulation is an emission regulation for the purposes of section 26 of the Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008 (“the Bylaw”), and is deemed to be an integral part of the Bylaw.
(2) Terms defined in the Bylaw, or incorporated by reference into the Bylaw, have the same meaning in this Emission Regulation.
- 3 Any operator who complies with the Bylaw and this Emission Regulation is exempt from section 5 of the Bylaw and from section 6 (2) and (3) of the Environmental Management Act provided that it also complies with any further restrictions or conditions imposed by the Environmental Management Act, or a regulation, permit, order or approved waste management plan under the Environmental Management Act.

Definitions

- 4 In this Emission Regulation:

“**automotive refinishing**” means spray coating carried out as a business for profit or gain and whether or not as part of a commercial or industrial undertaking of the type described in, but not limited to, North American Industry Classification Systems (NAICS) codes 4411 Automobile Dealers, 4412 Other Motor Vehicle Dealers and 8111 Automotive Repair and Maintenance classifications;

“**automotive refinishing facility**” means a building or structure at which automotive refinishing is being carried out or is capable of being carried out;

“**basecoat**” means a pigmented, coloured coating used as the first layer of a multi-stage topcoat or basecoat/clearcoat application;

“**clearcoat**” means a coating which contains no pigments or only transparent pigments and which is the final coating applied as a part of a multi-stage topcoat or basecoat/clearcoat application;

“coating” means a film forming material used for the decoration or protection of the surfaces of an object. coatings include, but are not limited to, lacquers, enamels, urethanes, elastomeric coatings, primers, primer surfacers, basecoats, midcoats and clearcoats;

“elastomeric coating” means a coating specially formulated for application over flexible parts, such as elastomeric bumpers;

“enamel” means a coating that undergoes additional polymerization or film-forming reaction after application to the substrate;

“enclosed spray gun wash system” means an electrically or pneumatically operated washing system designed to clean, rinse and drain spray application equipment. An enclosed spray gun wash system is a fully enclosed chamber that houses the spray application equipment being washed and that remains closed during the washing process, except when inserting or removing the equipment being washed. Cleaning is accomplished by forcing solvent through the spray application equipment;

“environmental training program” means a training and certification program, approved by the district director, including, but not limited to, instruction on environmental awareness and practices and techniques for the reduction of VOC emissions from automotive refinishing;

“existing facility” means any automotive refinishing facility which existed and was operational on 29 June 2001;

“fugitive emissions” means any gaseous, liquid or solid particulate matter that becomes airborne, the release of which could not reasonably be directed or controlled to pass through a stack, chimney or vent;

“good air control practice” means, but is not necessarily limited to:

- a) performing routine inspections, maintaining and calibrating all equipment in accordance with the manufacturer’s specifications for such equipment;
- b) operating all equipment in accordance with manufacturer’s design specifications for such equipment;
- c) maintaining an adequate supply of replacement and spare parts for all works; and
- d) maintaining equipment inspection and repair records of automotive refinishing activities;

“good engineering practice (GEP) stack height” means the height in accordance with methods set out in the applicable handbooks of the American Society of Heating, Refrigerating and Air Conditioning Engineers. GEP design must minimize or eliminate the effects of atmospheric downwash, wakes or eddy effects created by the automotive refinishing facility;

“high-volume low-pressure spray” means a coating application system which is operated at an air pressure of between 0.7 and 68.9 kilopascals (0.1 and 10 pounds per square inch gauge), measured at the centre of the air cap and at the centre of the air cap horns;

“lacquer” means a coating that does not undergo additional polymerization or film-forming reaction after application to the substrate;

“low emission spray gun cleaner” means a spray application equipment washing system, approved by the district director, used to clean spray application equipment that is not

enclosed during the cleaning process. A low emission spray gun cleaner minimizes evaporation, promotes the collection and recycling of solvent, and leaves no standing solvent remaining open to the atmosphere following equipment cleaning;

“midcoat” means a translucent or specially coloured coating that is applied as a separate layer between basecoats and clearcoats for special colour effects;

“modified facility” means an existing facility at which a new spray booth has been installed or where there has been any other significant modification or physical change to an existing spray booth, or significant change in the operation of an existing spray booth, after 29 June 2001;

“multi-stage topcoat” means a topcoat of more than two stages composed of:

- a) a basecoat,
- b) a midcoat, and
- c) a clearcoat;

“new facility” means any automotive refinishing facility that commenced operations after 29 June 2001;

“operator” includes:

- (a) a person who holds any interest in an automotive refinishing facility, including a lessee, but not including a secured creditor; and
- (b) a person who has management or control, direct or indirect, over the operations of an automotive refinishing facility;

“primer” means a coating applied prior to the application of a topcoat for the purpose of corrosion resistance or to promote adhesion;

“primer surfacer” means a coating applied prior to the application of a topcoat for the purpose of filling surface imperfections in the substrate, corrosion resistance, or to promote adhesion of the topcoat and includes anti-chip coatings applied to areas subject to stone chipping;

“spot repair” means spray coating to repair minor surface damage and imperfections to a surface area not exceeding 0.5 square metres (m²), and not employing more than 250 grams of coatings per hour or per unit refinished to a maximum of 1.5 kilograms of coatings per day or 3 kilograms of coatings per week;

“spray booth” means any enclosed structure or enclosed portion of a structure utilized to accommodate or carry out spray coating;

“spray coating” means the application of coatings to automobiles, light and medium duty trucks, heavy duty vehicles, trailers, equipment or utility vehicles, and their parts used for the transportation of people or property. The coating material is atomized and directed toward the object to be coated. Touch-up coating and the original coating applied at an original equipment manufacturing plant are excluded from this definition;

“technician” means an automotive refinishing prep technician and an automotive painter (automotive refinishing technician) or equivalent, as defined by the Industry Training Authority;

“topcoat” means the final coating or series of coatings applied to a surface primarily for aesthetic reasons, especially colour and appearance;

“touch-up coating” means a coating applied by brush or hand-held aerosol container;

“volatile organic compound” or “VOC” means any organic compound which participates in atmospheric photochemical reactions, but excludes, methane, ethane, 1,1,1 - trichloroethane (methyl chloroform), dichloromethane (methylene chloride), chlorofluorocarbons (CFCs), fluorocarbons (FCs), hydrochlorofluorocarbons (HCFCs), and HFC-134a, because of their negligible photochemical reactivity. For the purposes of calculating VOC content in coatings in this Emission Regulation, acetone and p-chlorobenzotrifluoride are also excluded from the definition of VOC; and

“VOC content in coatings” means the VOC content of automotive refinish products and components of such products, as applied. VOC content in coatings must be expressed in grams per litre (g/l) and calculated in accordance with procedures set out in Section 3.2.3 and Section 3.2.4 of the Canadian Council of Ministers of the Environment (CCME) National Standards for the Volatile Organic Compound Content of Canadian Commercial/ Industrial Surface Coating Products - Automotive Refinishing, October 1998, as amended or replaced.

Application of Emission Regulation

5 Every operator must comply with the requirements set out in this Emission Regulation.

Registration

6 All operators must register by January 1, 2009.

7 All operators of automotive refinishing facilities that commence operations after the date on which this Emission Regulation comes into force must register within three months of commencing operations.

Fees

8 All operators must pay a registration fee of \$100.

9 The registration fee is waived for all automotive refinishing facilities registering by January 1, 2009.

10 Each year, beginning 1 April 2009, each registered operator of an automotive refinishing facility must pay to the District a fee of \$200 for that calendar year or portion thereof, payable by April 1 of each year, or upon registration if registration occurs after April 1 of that year.

General Requirements and Standard Conditions

11 Every operator must operate and maintain works in accordance with good air pollution control practice so as not to cause pollution.

12 Without limiting the requirements of section 11, every operator must not discharge air contaminants that:

- (1) exceed zero percent opacity;
- (2) deposit beyond the premises on which the automotive refinishing is carried out; or
- (3) cause odour beyond the premises on which the automotive refinishing is carried out so as to cause a nuisance.

Material, Equipment and Operating Requirements

- 13** Every operator when spray coating must use only automotive refinish products containing a VOC content that is less than or equal to the maximum VOC content in coatings set out in Appendix 1, when prepared and applied in accordance with the manufacturer's instructions.
- 14** Every operator when spray coating must:
 - (1) employ and operate, either high-volume low-pressure spray guns or an alternate spray system with a transfer efficiency equivalent to high-volume low-pressure spray systems, at the air pressure required to achieve maximum transfer efficiency; and
 - (2) post at the automotive refinishing facility or otherwise have available for inspection by an officer notices supplied by the spray gun manufacturer setting out recommended spray gun operating parameters including the maximum inlet pressure, maximum atomizing air pressure and air cap number required to achieve the desired transfer efficiency.
- 15** Subject to section 16, every operator must perform spray coating within a spray booth equipped with a ventilation system that is:
 - (1) connected to an exhaust stack;
 - (2) designed, installed and operated to prevent fugitive emissions in accordance with established engineering principles and in accordance with applicable laws and enactments;
 - (3) equipped, on the exhaust side of the ventilation system, with effective two-stage, dual media, paint overspray arrestors comprising a primary strainer and a secondary filter, whether as separate filter elements or in combination; and
 - (4) activated at all times when spray coating is carried out and thereafter for the time required to cure the coating to a dust-free state as recommended by the manufacturer of the coating used.
- 16** The provisions of section 15 do not apply to spot repairs.
- 17** Every operator of a new automotive refinishing facility, a modified automotive refinishing facility or any other automotive refinishing facility designated by the district director must ensure that the ventilation stack discharge systems for any spray booth and any paint mix room are designed, constructed and installed in accordance with good engineering practice (GEP) stack height. GEP must be determined by a professional engineer, licensed to practice in the Province of British Columbia, whose area of professional specialty includes industrial ventilation. In addition, ventilation stack discharge systems must:
 - (1) be located away from air intakes of adjacent buildings;
 - (2) discharge stack gases vertically, without obstruction by the addition of a rain cap or other appurtenance; and

(3) discharge stack gases at a minimum velocity of 15 metres/second.

18 Every operator must employ for the cleaning and maintenance of spray application equipment used in spray coating:

- (1) an enclosed spray gun wash system or a low emission spray gun cleaner; and
- (2) organic gun wash solvents having a vapour pressure of not more than 6.0 kilopascals (45 mm Hg) at 20°C.

19 Every operator must employ good housekeeping practices to reduce the discharge of air contaminants, including, without limitation:

- (1) using only limited and measured quantities of VOC containing products;
- (2) storing all VOC containing materials in closed containers;
- (3) minimizing the generation of unused paint;
- (4) promptly cleaning up all spills of materials containing VOC;
- (5) employing environmentally sound solvent storage, recycling, treatment and disposal practices;
- (6) disposing of all waste materials containing VOC in closed containers;
- (7) shipping all waste and recyclable materials containing VOC in closed containers; and
- (8) if applicable
 - (a) regularly cleaning spray booth ducting and ventilation systems; and
 - (b) masking or cleaning internal spray booth surfaces with appropriate cleaning agents, such as water or dry strippable low VOC spray booth coatings.

20 Every operator must:

- (1) ensure that every technician employed by the operator has, within 12 months after commencing employment, successfully completed and obtained a certificate of completion for an environmental training program; and
- (2) display the certificate of completion for each technician at the automotive refinishing facility so that it is visible to the public, or otherwise have the certificate of completion available for inspection by an officer.

Process Monitoring, Record Keeping and Reporting Requirements

21 Every operator must keep, in accordance with section 22, accurate records and supporting documentation setting out, in respect of each of its automotive refinishing operations:

- (1) a record of the types and amounts of products used which contain VOC, and included for each product:
 - (a) the product brand name and category,
 - (b) the product mixing instructions as stated on the container or in literature supplied by the manufacturer or supplier,
 - (c) the maximum VOC content in coatings for the products and coatings systems, as applied,

- (d) the name and mailing address of the manufacturer or supplier, and
 - (e) the name and signature of an employee responsible for making the record;
- (2) a record of the types and amounts of coatings used for spot repair, including but not limited to the quantity of coatings used per hour or per unit refinished, and the quantity of coatings used per day and per week;
 - (3) a record of materials and residuals containing VOC sent for recycling or disposal, which sets out the types and amounts of such waste, the method and route for disposal or recycling, and the name and address of the company collecting the materials and residuals;
 - (4) a record of all inspections and maintenance conducted on all equipment used in automotive refinishing, as required in section 11, which sets out:
 - (a) the date and time of the inspection or maintenance,
 - (b) the condition of the works or other equipment observed during the inspection or maintenance, and
 - (c) the name and signature of the person who is responsible and able to verify the information contained in the record; and
 - (5) a record of the environmental training program completed by the operator and each technician engaged in automotive refinishing or spray coating.

22 Every operator must:

- (1) keep all records and supporting documentation for at least 3 years after the date of preparation or receipt;
- (2) upon the request of the district director or an officer, produce for inspection any records or supporting documentation kept under section 21 within 48 hours; and
- (3) upon the request of the district director or an officer, deliver copies of any records or supporting documentation kept under section 21 to the district director or an officer within 48 hours of such request.

Read a first time this 25 day of July, 2008.

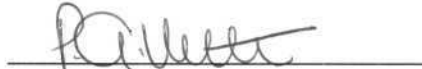
Read a second time this 25 day of July, 2008.

Read a third time this 25 day of July, 2008.

Reconsidered, passed and finally adopted by the Board of Directors of the Greater Vancouver Regional District this 25 day of July, 2008.



Chair



Secretary

Appendix 1

Allowable VOC Content in Coatings for Automotive Refinish Products

Product Type	Maximum VOC Content in Coatings ^(a) grams/litre ^a (lbs/US Gal ^b)
Surface cleaner	
• plastic substrates	780 (6.5)
• metal and other substrates	200 (1.7)
Pretreatment primers	780 (6.5)
Primer surfacers	580 (4.8)
Primer sealers	550 (4.6)
Single topcoats and basecoat/clearcoats	600 (5.0)
Multi-stage topcoats (more than two stages)	630 (5.2)
Specialty coatings	840 (7.0)

- (a) If an automotive refinish product is suitable for use in one or more of the above categories, then the lowest VOC content in coatings limit applies for that product,
- (b) Units in lbs/US Gal are provided for information only. Compliance will be determined based on VOC content in coatings as expressed in grams/litre.

In this Appendix:

“adhesion promoter” means a coating used to facilitate the bonding of a primer or topcoat on surfaces such as trim moldings, door locks, and door sills where sanding is impracticable and on plastic parts and the edges of sanded areas;

“anti-glare safety coating” means a low gloss coating used to minimize glare for safety purposes on the interior surfaces of a vehicle;

“bright metal trim repair” means a coating applied directly to chrome-plate metal surfaces for the purpose of appearance;

“gloss flattener” means a coating used to remove luster from topcoats;

“pretreatment primer” means a primer that contains a minimum of 0.5% acid, by weight, that is applied at a very low film thickness (~0.2 mils dry film thickness) directly to bare metal to provide corrosion resistance and promote adhesion of subsequent topcoats. The acid weight per cent of a pretreatment primer is to be determined using the American Society for Testing and Materials (ASTM) Method D 1613-96;

“primer sealer” means a coating applied prior to the application of a topcoat for the purpose of corrosion resistance, adhesion of the topcoat, colour uniformity and to promote the ability of an undercoat to resist penetration by the topcoat;

“single-stage topcoat” means a topcoat consisting of only one coating;

“specialty coatings” means a unique coating and compliant coating with additives that are necessary due to the unusual job performance requirements. Specialty coatings include, but are not limited to, adhesion promoters, uniform finish blenders, elastomeric coatings, gloss flatteners and bright metal trim repair, anti-glare safety coatings and single-stage lacquers used solely for the restoration of classic and antique automobiles;

“spot cleaning” means the use of conventional solvents, dispensed from an appropriate hand held spray bottle, to clean resistant difficult-to-remove deposits and stains;

“surface cleaner” means a surface preparation material used to remove foreign matter and contaminants such as wax, tar, grease and silicones from the surface to be coated. Spot cleaning, and equipment cleaning solvents are not included in this definition; and

“uniform finish blender” means a solvent blend or low solids clear solution used to melt overspray between a repaired area and an unrepaired area.