Permit-by-Rule Guidance Document for Auto Body Refinishing Operations

Knox County Department of Air Quality Management
140 Dameron Avenue
Knoxville, TN 37917
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Section 1: Introduction

The Knox County Department of Air Quality Management (Department) has implemented a Permit-by-Rule for Auto Body Refinishing Operations (which includes paint stripping and surface coating of motor vehicles and mobile equipment). After receiving a Notice of Authorization from the Department, this Permit-by-Rule allows the owner or operator to construct, modify, or operate eligible auto body refinishing operations. Also, the owner or operator will not be required to obtain construction or operating permits for the auto body refinishing operations utilizing this Permit-by-Rule. An auto body refinishing operation is eligible to utilize this Permit-by-Rule if it meets all of the following criteria:

(1) The auto body refinishing operation is located at a facility that does not have the potential to emit of:
   (a) 100 tons/year or greater of any air pollutant subject to regulation;
   (b) 10 tons/year or greater of any single hazardous air pollutant; or
   (c) 25 tons/year or greater of any combination of hazardous air pollutants.

(2) The auto body refinishing operation is located at a facility that does not complete more than 50 jobs per week.
   A job is defined as the total area to be refinished on an automobile body or light duty truck and may include the entire vehicle.

As there will be no written permit issued, this guidance is intended to be a tool to help businesses understand and comply with the Permit-by-Rule for Auto Body Refinishing Operations. It does not include a comprehensive listing of all environmental regulations that may be applicable to your business. It is a tool to be used only for understanding the Permit-by-Rule for Auto Body Refinishing Operations. If you have any questions, please contact the Department at (865) 215-5900 or aqm@aqm.co.knox.tn.us.
Section 2: Definitions

“Air contaminant” means particulate matter, dust, fumes, gas, mist, smoke, vapor, or odor; or any combination thereof.

“Airless and air-assisted airless spray” mean any paint spray technology that relies solely on the fluid pressure of the paint to create an atomized paint spray pattern and does not apply any atomizing compressed air to the paint before it leaves the paint nozzle. Air-assisted airless spray uses compressed air to shape and distribute the fan of atomized paint, but still uses fluid pressure to create the atomized paint.

“Coating” means a material spray-applied to a substrate for decorative, protective, or functional purposes. Coating does not include the following materials:

(a) Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances.

(b) Paper film or plastic film that may be pre-coated with an adhesive by the film manufacturer.

(c) Adhesives, sealants, maskants, or caulking materials.

(d) Temporary protective coatings, lubricants, or surface preparation materials.

(e) In-mold coatings that are spray-applied in the manufacture of reinforced plastic composite parts.

“Electrostatic application” means any method of coating application where an electrostatic attraction is created between the part to be coated and the atomized paint particles.

“Facility” means any building, structure, installation, activity, or combination thereof which contains one or more sources of air contaminants.

“High-volume, low-pressure (HVLP) spray equipment” means spray equipment that is permanently labeled as such and used to apply any coating by means of a spray gun which is designed and operated between 0.1 and 10 pounds per square inch gauge (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns.

“Motor vehicle and mobile equipment surface coating” means the spray application of coatings to assembled motor vehicles or mobile equipment. It does not include the surface coating of motor vehicle or mobile equipment parts or subassemblies at a vehicle assembly plant or parts manufacturing plant.

“Notice of Authorization” means a confirmation from the Director of authorization to construct, modify, or operate an eligible source under a permit-by-rule.

“Notice of Intent” means a written notification requesting authorization under a permit-by-rule.

“Owner or operator” means any person who owns, leases, controls, operates, or supervises a facility, source, or control device.

“Paint stripping” means the removal of dried coatings from wood, metal, plastic, and other substrates.

“Permit-by-Rule” means authorization from the Director for the owner or operator to construct, modify, or operate an eligible source if such construction, modification, or operation is in compliance with applicable Knox County Air Quality Management Regulations.
“Potential to emit” means the maximum capacity of a source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is legally enforceable.

“Source” means any property, real or personal, which emits or may emit air contaminants into the outdoor atmosphere.

“Spray-applied coating operations” means coatings that are applied using a hand-held device that creates an atomized mist of coating and deposits the coating on a substrate. Spray-applied coatings do not include the following materials or activities:

(a) Coatings applied from a hand-held device with a paint cup capacity that is equal to or less than 3.0 fluid ounces (89 cubic centimeters).

(b) Surface coating application using powder coating, hand-held, non-refillable aerosol containers, or non-atomizing application technology, including, but not limited to, paint brushes, rollers, hand wiping, flow coating, dip coating, electrodeposition coating, web coating, coil coating, touch-up markers, or marking pens.

(c) Thermal spray operations (also known as metallizing, flame spray, plasma arc spray, and electric arc spray, among other names) in which solid metallic or non-metallic material is heated to a molten or semi-molten state and propelled to the work piece or substrate by compressed air or other gas, where a bond is produced upon impact.

“Startup” shall mean the setting in to operation of a source for the production of product for sale or use as raw materials or steam or heat.

“Target HAP” are compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).

“Target HAP containing coating” means a spray-applied coating that contains any individual target HAP that is an Occupational Safety and Health Administration (OSHA)-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) at a concentration greater than 0.1 percent by mass, or greater than 1.0 percent by mass for any other individual target HAP compound. For the purpose of determining whether materials you use contain the target HAP compounds, you may rely on formulation data provided by the manufacturer or supplier, such as the safety data sheet (SDS), as long as it represents each target HAP compound in the material that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other target HAP compounds.
Section 3: How to Obtain a Notice of Authorization to Utilize Permit-by-Rule for Emergency Stationary Internal Combustion Engines

A Notice of Authorization from the Department must be received prior to construction, modification, or operation of auto body refinishing operations under the Permit-by-Rule for Auto Body Refinishing Operations. The procedure for obtaining a Notice of Authorization to construct new auto body refinishing operations under this Permit-by-Rule is contained in Section 3.1. The procedure for obtaining a Notice of Authorization to operate auto body refinishing operations under this Permit-by-Rule that are currently operating under a construction or operating permit is contained in Section 3.2.

3.1 Procedure to Obtain a Notice of Authorization for a New Auto Body Refinishing Operation

(a) The owner or operator must submit a Notice of Intent (which can be found on the Department’s website at www.knoxcounty.org/airquality/downloads.php) to the Department at least seven (7) days prior to the estimated start date of construction of the auto body refinishing operations.

(b) The Department will review the Notice of Intent to verify the auto body refinishing operations meet all applicable Permit-by-Rule requirements (the Department may request additional information during the review).

(c) Once the Department determines the auto body refinishing operations are eligible, the Department will issue a Notice of Authorization to the owner or operator.

3.2 Procedure to Obtain a Notice of Authorization for an Existing Permitted Auto Body Refinishing Operation

(a) The owner or operator must submit a Notice of Intent (which can be found on the Department’s website at www.knoxcounty.org/airquality/downloads.php) to the Department. The existing permits the auto body refinishing operations are currently operating or constructing under must be listed on the Notice of Intent.

(b) The Department will review the Notice of Intent to verify the auto body refinishing operations meet all applicable Permit-by-Rule requirements (the Department may request additional information during the review).

(c) Once the Department determines the auto body refinishing operations are eligible to utilize Permit-by-Rule, the Department will revoke the existing permits listed on the Notice of Intent and issue a Notice of Authorization to the owner or operator.
Section 4: Permit-by-Rule Requirements for Auto Body Refinishing Operations

The owner or operator utilizing Permit-by-Rule for Auto Body Refinishing Operations must comply with the requirements contained in this Section.

4.1 Emission Limitations, Operational Restrictions, and Control Equipment Operating Parameter Limitations

(a) If any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) occurs, shutdown the auto body refinishing operation that is served by that control system(s).

4.2 Testing, Monitoring, and Recordkeeping Requirements

(a) Keep the issued Notice of Authorization readily available for inspection by the Department on the operating premises or an alternative location approved by the Department.

(b) Keep all required records for a period of five (5) years from the date the record was created and be readily available for inspection or submittal to the Department. Records include, but are not limited to, any required monitoring data, testing data, and support information. Support information includes, but is not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all required reports. Records may be maintained in computerized form.

(c) Keep a record of maintenance performed on the auto body refinishing operations (e.g., changing filters in spray booths and/or preparation stations, etc.).

(d) Keep a record of the number of jobs performed each week.

(e) If the Department has granted your Petition for Exemption from the surface coating requirement of the Paint Stripping/Misc Surface Coating NESHAP (see item (b) of Section 4.4), keep the purchase records, invoices, and safety data sheets (SDS) of the coatings consumed by the auto body refinishing operations.

4.3 Reporting Requirements

(a) Submit all required reports and notifications to the Department at:

Knox County Department of Air Quality Management  
140 Dameron Avenue  
Knoxville, TN 37917

(b) Submit a written report of any deviations (excursions) from emission limitations, operational restrictions, qualifying criteria, and control equipment operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements to the Department within 30 days of the date the deviation occurred. The report shall describe the specific limitation or operational restriction exceeded, the probable cause of such deviation, and any corrective actions or preventive measures that have been or will be taken.

(c) When a malfunction of equipment causes emissions in excess of any applicable emission limit, notify the Department within 24 hours of the malfunction and provide a statement giving all pertinent facts, including the duration of the malfunction. Also, notify the Department when the malfunction has been corrected.
4.4 Miscellaneous Requirements

(a) Comply with the additional requirements of the 40 CFR Part 63, Subpart HHHHHH - National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources (Paint Stripping/Misc Surface Coating NESHAP) as specified in Table 1 below that applies to your auto body refinishing operations.

Table 1: Additional Requirements for Specific Auto Body Refinishing Operations

<table>
<thead>
<tr>
<th>If your auto body refinishing operation performs...</th>
<th>You must comply with the additional requirements contained in...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paint stripping using methylene chloride (MeCl) for the removal of dried paint (including, but not limited to, paint, enamel, varnish, shellac, and lacquer) from wood, metal, plastic, and other substrates.</td>
<td>Section 5 (Additional Requirements for Paint Stripping Operations Subject to the Paint Stripping/Misc Surface Coating NESHAP).</td>
</tr>
<tr>
<td>Spray application of coatings and the Department has not granted an exemption from the surface coating requirements of the Paint Stripping/Misc Surface Coating NESHAP (see item (b) below).</td>
<td>Section 6 (Additional Requirements for Surface Coating Operations Subject to the Paint Stripping/Misc Surface Coating NESHAP).</td>
</tr>
</tbody>
</table>

(b) If the surface coating operation does not spray apply target HAP containing coatings, a Petition for Exemption from the surface coating requirements of the Paint Stripping/Misc Surface Coating NESHAP may be submitted the Department and EPA. The Department will either grant or deny the Petition for Exemption from the surface coating requirement of the Paint Stripping/Misc Surface Coating NESHAP. If circumstances change such that you intend to spray apply target HAP containing coatings after being granted an exemption from the surface coating requirement of the Paint Stripping/Misc Surface Coating NESHAP, comply with the additional requirements contained in Section 6 and submit the Initial Notification (see item (a) of Section 6.3) within 180 of the change.

**NOTE:** An example “Petition for Exemption” from the surface coating requirements of the Paint Stripping/Misc Surface Coating NESHAP is available on the Department’s website at [www.knoxcounty.org/airquality/downloads.php](http://www.knoxcounty.org/airquality/downloads.php).
Section 5: Additional Requirements for Paint Stripping Operations Subject to the Paint Stripping/Misc Surface Coating NESHAP

The owner or operator utilizing Permit-by-Rule for Auto Body Refinishing Operations must comply with the requirements contained in this Section for paint stripping operations using methylene chloride (MeCl) for the removal of dried paint (including, but not limited to, paint, enamel, varnish, shellac, and lacquer) from wood, metal, plastic, and other substrates.

5.1 Emission Limitations, Operational Restrictions, and Control Equipment Operating Parameter Limitations

(a) At all times, including periods of startup, shutdown, and malfunction, operate and maintain the paint stripping operations, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

(b) Evaluate each application to ensure that there is a need for paint stripping.

(c) Evaluate each application to ensure that an alternative paint stripping technique cannot be used in place of a paint stripper containing Methylene Chloride (MeCl).

(d) Reduce exposure of all paint strippers containing MeCl to the air.

(e) Optimize application conditions when using paint strippers containing MeCl to reduce evaporation.

(f) Practice proper storage and disposal of paint strippers containing MeCl.

(g) For paint stripping operations with an annual usage of more than one (1) ton of MeCl, develop and implement a written MeCl minimization plan to minimize the use and emissions of MeCl. Also, post a sign or placard outlining the minimization plan in each area where paint stripping operations occur. The minimization plan must, at the minimum, address items (b) through (f) above.

5.2 Testing, Monitoring, and Recordkeeping Requirements

(a) Keep records of the annual usage of paint strippers containing MeCl and the paint strippers MeCl content information (such as Safety Data Sheets).

(b) For paint stripping operations with an annual usage of more than one (1) ton of MeCl, keep a copy of the current MeCl minimization plan.

(c) Keep a record of any deviation from the requirements of Section 5.1 which contains the date and time of the deviation, and a description of the nature of the deviation and the actions taken to correct the deviation.

5.3 Reporting Requirements

(a) Submit an Initial Notification to the Department and EPA within 180 days of initial startup that includes the following information:

   (1) The company name, if applicable.
   (2) The name, title, street address, telephone number, e-mail address (if available), and signature of the owner and operator, or other certifying company official certifying the truth, accuracy, and completeness of the notification.
   (3) The street address (physical location) of the paint stripping operation.
(4) A statement that the notification is being submitted in response to the National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources (Paint Stripping/Misc Surface Coating NESHAP).

(5) A brief description of the type of operation identifying the method(s) of paint stripping employed (e.g., chemical, mechanical) and the substrates stripped (e.g., wood, plastic, metal).

(6) Whether you plan to annually use more than one (1) ton of MeCl after the compliance date.

(7) A statement of whether the paint stripping operation has complied with the requirements of the Paint Stripping/Misc Surface Coating NESHAP or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance.

NOTE: An example “Initial Notification” is available on the Department’s website at www.knoxcounty.org/airquality/downloads.php.

(b) Submit an Annual Notification of Changes Report to the Department and EPA in each calendar year in which information previously submitted in either the Initial Notification (see item (a) above) or a previous annual notification of changes report has changed. Also, submit an Annual Notification of Changes Report in each calendar year any deviation from the requirements of Section 5.1 occurred. This includes notification when paint stripping sources that have not developed and implemented a written MeCl minimization plan in accordance with item (g) of Section 5.1 used more than one (1) ton of MeCl in the previous calendar year. The Annual Notification of Changes Report must be submitted prior to March 1st of each calendar year when reportable changes have occurred and must include the following information:

(1) The company’s name and the street address (physical location) of the paint stripping operation.

(2) The name, title, street address, telephone number, e-mail address (if available), and signature of the owner and operator, or other certifying company official certifying the truth, accuracy, and completeness of the notification.

(3) A statement of whether the paint stripping operation has complied with the requirements of the Paint Stripping/Misc Surface Coating NESHAP or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance.


5.4 Miscellaneous Requirements

None
Section 6: Additional Requirements for Surface Coating Operations Subject to the Paint Stripping/Misc Surface Coating NESHAP

The owner or operator utilizing Permit-by-Rule for Auto Body Refinishing Operations must comply with the requirements contained in this Section for surface coating operations, unless the Department has granted a Petition for Exemption from the surface coating requirements of the Paint Stripping/Misc Surface Coating NESHAP (see item (b) of Section 4.4).

6.1 Emission Limitations, Operational Restrictions, and Control Equipment Operating Parameter Limitations

(a) At all times, including periods of startup, shutdown, and malfunction, operate and maintain the surface coating operation, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

(b) All painters must have completed training and be certified in the proper spray application of surface coating and the proper setup and maintenance of spray equipment no later than 180 days after being hired. Training and certification will be valid for a period not to exceed five (5) years after the date the training is completed. All personnel must be recertified every five (5) year by receiving refresher training.

(c) All spray-applied coatings must be applied in a spray booth, preparation station, or mobile enclosure that meets the following requirements:
   (1) All spray booths, preparation stations, and mobile enclosures must be fitted with a type of filter technology that is demonstrated to achieve at least 98-percent capture of paint overspray.
   (2) Spray booths and preparation stations used to refinish complete motor vehicles or mobile equipment must be fully enclosed with a full roof, and four complete walls or complete side curtains, and must be ventilated at negative pressure so that air is drawn into any openings in the booth walls or preparation station curtains. However, if a spray booth is fully enclosed and has seals on all doors and other openings and has an automatic pressure balancing system, it may be operated at up to, but not more than, 0.05 inches water gauge positive pressure.
   (3) Spray booths and preparation stations that are used to coat miscellaneous parts and products or vehicle subassemblies must have a full roof, at least three complete walls or complete side curtains, and must be ventilated so that air is drawn into the booth. The walls and roof of a booth may have openings, if needed, to allow for conveyors and parts to pass through the booth during the coating process.
   (4) Mobile ventilated enclosures that are used to perform spot repairs must enclose and, if necessary, seal against the surface around the area being coated such that paint overspray is retained within the enclosure and directed to a filter to capture paint overspray.

(d) All spray-applied coatings must be applied with a high volume, low pressure (HVLP) spray gun, electrostatic application, airless spray gun, air-assisted airless spray gun, or an equivalent technology that is demonstrated by the spray gun manufacturer to achieve transfer efficiency comparable to one of the spray gun technologies listed above for a comparable operation, and for which written approval has been obtained from the Department.

(e) All paint spray gun cleaning must be done so that an atomized mist or spray of gun cleaning solvent and paint residue is not created outside of a container that collects used gun cleaning solvent.

6.2 Testing, Monitoring, and Recordkeeping Requirements

(a) Keep the certification that each painter has completed the required training (see item (b) of Section 6.1) with the date the initial training and the most recent refresher training was completed.
(b) The owner or operator shall keep documentation of the filter efficiency of any spray booth exhaust filter material.

(c) Keep a record of any deviation from the requirements of Section 6.1 which contains the date and time of the deviation, and a description of the nature of the deviation and the actions taken to correct the deviation.

6.3 Reporting Requirements

(a) Submit an Initial Notification to the Department and EPA within 180 days of initial startup that includes the following information:
   (1) The company name, if applicable.
   (2) The name, title, street address, telephone number, e-mail address (if available), and signature of the owner and operator, or other certifying company official certifying the truth, accuracy, and completeness of the notification.
   (3) The street address (physical location) of the surface coating operation.
   (4) A statement that the notification is being submitted in response to the National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources (Paint Stripping/Misc Surface Coating NESHAP).
   (5) A brief description of the type of operation including the following information:
      (i) indicate whether the source is a motor vehicle and mobile equipment surface coating operation or a miscellaneous surface coating operation;
      (ii) the number of spray booths and preparation stations; and
      (iii) the number of painters usually employed at the operation.
   (6) A statement of whether the surface coating operation has complied with the requirements of the Paint Stripping/Misc Surface Coating NESHAP or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance.

NOTE: An example “Initial Notification” is available on the Department’s website at www.knoxcounty.org/airquality/downloads.php.

(b) Submit an Annual Notification of Changes Report to the Department and EPA in each calendar year in which information previously submitted in either the Initial Notification (see item (a) above) or a previous annual notification of changes report has changed. Also, submit an Annual Notification of Changes Report in each calendar year any deviation from the requirements of Section 6.1 occurred. The Annual Notification of Changes Report must be submitted prior to March 1st of each calendar year when reportable changes have occurred and must include the following information:
   (1) The company’s name and the street address (physical location) of the surface coating operation.
   (2) The name, title, street address, telephone number, e-mail address (if available), and signature of the owner and operator, or other certifying company official certifying the truth, accuracy, and completeness of the notification.
   (3) A statement of whether the surface coating operation has complied with the requirements of the Paint Stripping/Misc Surface Coating NESHAP or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance.


6.4 Miscellaneous Requirements
None