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In Washington State, regulations for auto-body shops to protect air quality generally come from EPA and local air agencies. Please look in *Appendix A* on page 77 for your specific county information. (These numbers are also listed further on in this section.)

If you are unsure about what rules apply to your shop, call your local air agency or contact the Permit Assistance Center at the Washington State Office of Regulatory Assistance (ORA) to get a comprehensive view of your requirements. ORA's Environmental Permit Service Center is open 9 a.m. to 4 p.m., Monday through Friday. Call (360) 407-7037 or (800) 917-0043 or send an e-mail to help@ora.wa.gov.

New Federal Requirements

Area source rule

EPA established an "area-source rule" for air quality to reduce the incidence of cancer caused by hazardous air pollutants (HAPs) in urban areas. This rule directly affects operations at auto body shops. Participation in this pilot will fill the notification requirements for this new rule.

The National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart HHHHHH – *Paint Stripping and Miscellaneous Surface Coating Operations* affects those who apply spray coatings to motor vehicles or mobile equipment, such as automobiles and light trucks. The rule can be viewed at www.epa.gov/ttn/atw/area/fr17se07b.pdf.

EPA has partnered with Ecology on this pilot program by allowing the self-certification checklist (accompanying this manual) to serve as the notification requirements for the area source rule. A completed self-certification checklist submitted to Ecology by March 31, 2009 qualifies as the Initial Notification. Ecology will share this information with EPA.

If your shop is already complying with the rule when you fill out the self-certification checklist *and* you complete and sign the Certification Statement attesting accuracy, then the self-certification will also count as your Notification of Compliance. If you have not met the requirements by the time you submit your self-certification, you can simply submit your Notification of Compliance directly to EPA by March 11, 2011, as outlined below.

Please read the following section carefully and make note of the changes that you will be expected to adopt. The new rule has requirements for painter training, spray booth filter efficiency, use of a spray booth, and paint stripping using methylene chloride chemical strippers.

Even if you do not spray coatings containing the targeted HAPs, you must still register with EPA for your Initial Notification. Again, completing the self-certification checklist for this pilot will count as your Initial Notification.

Effective dates

- Existing Sources: January 10, 2011
- New Sources: Upon startup after January 9, 2008

For more information, see the area source Web site *Rule Compilation Table* and look under MACT Subpart HHHHHH at www.epa.gov/ttn/atw/area/compilation.html or e-mail questions to R10_area_sources@epa.gov or call Heather Valdez at (206) 553-6220.

Steps to Comply With the New Rules

Required notifications

Step 1: Register

Complete the Local Source Control Auto Body Pilot Self-certification Checklist and submit to Ecology **or** submit an Initial Notification to EPA Region 10.

If you are already in compliance with all of the requirements when submitting the Initial Notification, include a signed Certification Statement with your Self-certification Checklist and you won't need to submit the Notification of Compliance later.

If you submit the Initial Notification or the Notification of Compliance directly to EPA, you can use the sample form *Appendix B* on page 83. You don't have to use the form, but you need to provide all the information requested on it.

Initial Notification must be received by:

Existing Sources:	January 11, 2010
New Sources:	July 7, 2008 or within 180 days of start-up

Send to:

Complete the Local Source Control Auto Body Pilot Self-certification Checklist and submit to:
Washington State
Department of Ecology
PO Box 47660
Olympia WA 98504-7660
Attn: Environmental Results Program

By March 31, 2009

OR

Complete an Initial Notification Form and submit to:

EPA Region 10
1200 Sixth Avenue #900 AWT-107
Seattle WA 98101
Attn: Area Sources

By January 11, 2010 or within 180 days of startup for new shops

Step 2: Make necessary changes at your shop

Some of the changes required may cost you money initially, but this cost can be offset over time by more efficient use of labor and materials. The sooner you start planning for and making the changes, the sooner you can start saving money. Read on to learn about the changes.

Step 3: Submit Notification of Compliance by March 11, 2011

The Notification of Compliance can use the same form as the Initial Notification. There is a sample form you can use in *Appendix B* on page 83. You don't have to use this form but you need to provide all of the information requested on it. If you were in compliance when submitting your Initial Notification or self-certification checklist and you submitted a signed Certification Statement, then you are not required to submit the Notification of Compliance.

Send to:
EPA Region 10
1200 6th Ave, Suite 900, AWT-107
Seattle WA, 98101

New training for painters

By January 10, 2011, all painters that spray-apply coatings must have completed classroom and hands-on training in the proper selection, mixing, and application of coatings. After January 10, 2011, the training must be completed no later than 180 days after hiring. Refresher training is required every five years.

Training must include:

- Spray gun equipment selection, set up, and operation. This includes measuring coating viscosity, selecting the proper fluid tip or nozzle, and achieving the proper spray pattern, air pressure and volume, and fluid delivery rate.

- Spray technique for different types of coatings to improve transfer-efficiency and minimize coating usage and overspray. This includes maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke.
- Routine spray booth and filter maintenance, including filter selection and installation.
- An overview of all the environmental requirements of the new area source rule covered here.

Proof of equivalent training and work experience can fulfill the painter-training requirement. Training requirements are described in §63.11173(f) at www.epa.gov/ttn/atw/area/fr09ja08.pdf. (See *Appendix C* on page 87 for training resources.)

Spray gun requirements

Old air-powered spray guns are obsolete

By January 10, 2011, use only high-volume, low-pressure (HVLP) spray guns, electrostatic spray guns, airless spray guns, or approved equivalents.

Any non-atomized application technique demonstrated to the appropriate air agency and determined to achieve equivalent emission reductions to HVLP or electrostatic-spray equipment may also qualify.

SAVE MONEY!

USING HIGH TRANSFER-EFFICIENCY SPRAY GUNS:

- DECREASES THE AMOUNT OF PAINT USED.
- DECREASES BOOTH-CLEANING EXPENSES.
- MAY DECREASE WASTE-DISPOSAL COSTS.

Enclosed spray gun cleaners

By January 10, 2011, paint spray gun cleaning must be done so that no fumes escape during cleaning. All spray guns must be cleaned in an enclosed spray-gun cleaner, by hand cleaning the disassembled gun parts, or by flushing solvent through the gun without atomizing the solvent or paint residue. Spraying solvent through a gun outside of a gun cleaner is prohibited.

Waste solvents collected must be kept in closed containers to avoid evaporation to the air. Enclosed spray-gun cleaners prevent solvent vapors from escaping into the environment. They also separate the sludge waste and re-circulate the solvent for reuse. Cleaning spray guns in enclosed gun cleaners can extend the life span of the gun.

Spray booth filter requirements

By January 10, 2011, all spray-applied coatings must be applied in an enclosed prep station or spray booth that is ventilated so that the exhaust passes through filters that are at least 98 percent efficient. Talk to your vendor to purchase a filter that is rated to meet these standards.

Owners and operators may use published filter efficiency data provided by vendors to show compliance with this requirement and are not required to perform this measurement.

When choosing spray booth filters, avoid filters containing halogenated organic compounds (HOCs). HOCs are regulated by the Washington State *Dangerous Waste Regulations*. Some filters use HOCs in the manufacturing process or as flame-retardants and may have very high levels even before they are used. Ecology does not recommend using filters manufactured in this way. Request filters without HOCs from your filter vendor.

Painting in an enclosed spray booth

The spray booth does not have to be a commercially manufactured booth, but it does need to fit the following criteria:

- Full cars must be painted in a spray booth with four walls, a roof, and a ventilation system. (Filters in the booth must remove at least 98% of the particulates. Your filter provider can give you the right filters and necessary paperwork to document the efficiency.)
- Parts of cars must be painted in a booth with at least three walls or flaps, a roof, and a ventilation system that pulls air into the spray booth or prep station.
- Spot repairs must be done in an enclosure that prevents any mist from getting out of the enclosure.

Preparation areas

Prep stations have specific requirements in the Fire Code and for the Division of Occupational Safety and Health (DOSH). Spray coating more than nine square feet needs to occur in a totally enclosed filtered booth or spray area (i.e., a spray booth). Spray coating less than nine square feet may occur in a dedicated preparation area exhausted through a stack with a 98% capture efficiency or re-circulated back into the shop after passing through a carbon adsorption system.

In general, spray booths and prep stations have to meet the same requirements.

- A positive pressure air supply with six complete air changes per hour and an intake face velocity of more than 100 feet per minute (fpm).
- Curtains or partitions that are non-combustible or have limited combustibility.
- A dedicated mechanical exhaust and filtration system.
- An approved automatic extinguishing system.

The amount of material sprayed in a prep station may not exceed 3.8 L (1 gallon) in any 8-hour period and spraying must not be continuous.

Paint stripping using methylene chloride

Methylene chloride, also called dichloromethane, is a listed hazardous air pollutant in Washington. Methylene chloride paint stripping waste must be managed as a state and federally regulated dangerous waste, thereby increasing your regulatory cost and compliance burden. Further, methylene chloride is regulated by the U.S. Occupational Safety and Health Administration (OSHA) for its ability to cause cancer and worsen heart problems.

By January 10, 2011, all shops/sources must certify that they have taken steps to minimize evaporative losses.

Hazards of Methylene Chloride (MeCl)/ Dichloromethane

- HARMFUL IF SWALLOWED OR INHALED.
- AN EYE AND SKIN IRRITANT.
- READILY ABSORBED THROUGH THE SKIN.
- AN ASPHYXIANT/ MAY CAUSE SUFFOCATION.
- A CENTRAL-NERVOUS-SYSTEM DEPRESSOR.
- POSSIBLY CAUSES CANCER AND/OR MUTATIONS IN HUMANS.

Steps may include:

- Evaluate whether it is possible to re-coat the piece without removing the existing coating.
- Ensure that there is no alternative paint stripping technology that can be used, optimizing stripper application conditions.
- Reducing exposure to air, and proper storage and disposal.

Minimization Plan

Sources that use one ton or more per year of paint stripper containing methylene chloride must also certify that they have developed, posted, and implemented a written methylene chloride minimization plan.

A minimization plan must include how the shop will implement the above management practices with regard to its facility operations. The plan must be kept on-site at all times and a placard or sign posted outlining the methylene chloride minimization plan in each area where paint stripping occurs.

Necessary records

In addition to the notifications and reports described above, all businesses must have records showing:

- Annual usage of methylene chloride in paint strippers.
- Records such as MSDS sheets for all paint strippers containing methylene chloride.
- The methylene chloride minimization plan for sources using one ton or more per year.
- Documentation of any deviations.
- Documentation of any information used to submit notifications or reports.

Keep these records to prove compliance

- **Initial Notification** — outlining when and how you comply with the new rules. See information above and in *Appendix B*, on page 83. Copy the self-certification checklist and Return-to-Compliance plan before submitting to Ecology.
- **Notification of Compliance** — could be the same form that was used for Initial Notification.
- **Certification Statement** — attesting to the accuracy of the self-certification. Must be signed and dated by the owner or operator of the shop. Make a copy before submitting to Ecology. The Certification Statement was included in the self-certification packet that arrived with this manual.

- **Annual notification of changes report** — after the compliance date has passed, this report is due March 1st of the following year, for each calendar year in which information previously submitted has changed. Report changes in equipment (spray booth or exhaust stacks), business name, or ownership, but do not include changes that were made strictly for the purpose of compliance with Subpart HHHHHH.
- **Painter training certifications.**
- **Spray-booth filter efficiency documentation.**
- **Spray-gun transfer efficiency documentation.**
- **Methylene chloride content information such as an MSDS.**
- **Annual usage** of methylene chloride for paint stripping, and written methylene chloride **minimization plan** if annual usage is over one ton per year.
- **Deviation and corrective action documentation**, if any.

The full text of the National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart HHHHHH – *Paint Stripping and Miscellaneous Surface Coating Operations Rule* is on the Internet at www.epa.gov/ttn/atw/area/fr09ja08.pdf.

State and Local Air Agency Requirements

Registration with local air agencies

Regional air agencies regulate activities at auto body shops. The air agencies adopt many of the federal and state regulations and add local ordinances. In counties without air agencies, Ecology serves the role. The air agencies all have slightly different rules that pertain to auto body shops.

This section summarizes some of the general requirements for registration, permits, operations, maintenance manuals, and dust control. Contact your local air agency to know exactly which rules apply to your shop. Contact information can be found further on in this section and in *Appendix A* on page 77.

All shops must register with the regional air agency

Registration typically occurs through the permit or notification process and then is renewed annually. An emission report may be requested as part of this process.

Notice of Construction permits

A Notice of Construction (NOC) permit, or Order of Approval, is a pre-construction permit required by local air agencies prior to the start of new building construction or exhaust system upgrades. Auto body shops are generally required to have an air-quality permit prior to building or modifying their facility. There are exceptions for shops built before permits were required, and then only if the exhaust equipment was not modified since the shop was built. Some counties have exceptions based on volatile organic compound (VOC) emissions.

In your application for this permit describe the equipment you will use, the type of air pollution you will make, and what sort of air-pollution controls you will put into place. You probably already have this permit, but if you don't, please apply for one with your local air agency. There is a list of air agency contacts in *Appendix A* on page 77.

Operation and Maintenance manuals

Some regional air agencies require businesses to keep an Operation and Maintenance (O&M) manual. If you are unclear whether you are required to keep an O&M manual, contact your local air agency. You may be asked to show your manual during an inspection.
Your air (NOC) permit may specify items to include in your O&M manual. Even if you don't have an NOC permit, or your permit does not require a manual, Ecology recommends you create and maintain one to track compliance, health, and safety issues.

Air O&M manuals usually contain:

- Normal operating parameters for all emission units (such as spray guns and spray booths).
- Manuals and specification sheets for all emission units and other equipment (spray guns, spray booths, vacuum sanders, oil/water separators, and compressors).
- Preventative maintenance schedules and records.
- A log of the maintenance performed (filter changes, repairs, and pressure-drop readings for manometers for the previous 24 months).
- A description of the monitoring procedures and schedule.
- Procedures for emergencies and abnormal control-system operation.
- Names of employees trained to properly operate and maintain equipment.

Regional air agency contacts:

Puget Sound Clean Air Agency
(King, Kitsap, Pierce, Snohomish Counties)
1904 Third Avenue, Suite 105
Seattle, WA 98101-2038
Telephone: (206) 343-8800 or (800) 552-3565
Fax: (206) 343-7522; E-mail: pscleanair.org
Internet: http://www.pscleanair.org

Northwest Clean Air Agency
(Island, Skagit, Whatcom Counties)
1600 South Second Street
Mount Vernon, WA 98273-5202
Telephone: (360) 428-1617
Telephone: (800) 622-4627 (Island & Whatcom)
Fax: (360) 428-1620; E-mail: info@nwcleanair.org
Internet: http://www.nwcleanair.org

Spokane Regional Clean Air Agency
1101 West College Avenue, Suite 403
Spokane, WA 99201
Telephone: (509) 477-4727
Fax: (509) 477-6828;
E-mail: publicinfo@spokanecleanair.org
Internet: http://www.spokanecleanair.org/

Olympic Region Clean Air Agency *(Clallam, Grays Harbor, Jefferson, Mason, Pacific, Thurston Counties)*
2940 B Limited Lane NW
Olympia WA 98502
Telephone: (360) 586-1044 or (800) 422-5623
Fax: (360) 491-6308; E-mail: info@orcaa.org
Internet: http://www.orcaa.org

Dust Control

Dust from sanding can be a problem for worker health, work quality, indoor and outdoor air pollution, and stormwater run-off. Auto body shops must control dust to comply with regulations.

Sandblasting

All abrasive blasting operations are regulated by Washington State.

- Abrasive blasting shall be performed inside a booth, hangar, or cabinet designed to capture the blast grit or overspray.
- Outdoor blasting of structures or items too large to be reasonably handled indoors shall employ control measures such as curtailment during windy periods and enclosure of the area being blasted with tarps.
- Outdoor blasting shall be performed with either steel shot or an abrasive containing less than one percent (by mass) which would pass through a No. 200 sieve.

Dust control measures

Practice these dust-control measures:

- Use a vacuum sander, or at least vacuum the dust as soon as possible after sanding.
- Sand in designated, controlled areas.
- Watch your feet; keep dust in controlled areas by not tracking it.
- Keep dust out of floor drains, gutters, streets, and storm drains.
- Regularly clean up dust that could contaminate stormwater, and pre-treat water that has been contaminated with dust before it goes to the storm sewer.
- Lower waste-disposal costs by keeping filler dust out of wash waters, paint waste, and sludge.
- Manage dust as dangerous waste or test before disposal to show that it is not dangerous.

Top Pollution Prevention Tips for Air Quality

Below are the top prevention tips to better reduce or eliminate air pollution from your processes. If the EnviroStars Program is available in your jurisdiction and you would like to participate, these may be helpful ideas to use for your improvement goals. (See the *EnviroStars* section on page 73 for more information.)

- ❑ **Make sure the paint filters are properly seated** in spray booths and prep stations and routinely checked for proper fit.
- ❑ **Use a local-exhaust-ventilation vacuum sander with as much airflow as is available**. For more information www.cdc.gov/niosh/sanding.html.

Use less solvent and paint

- ❑ **Reduce solvent evaporation**—an enclosed gun-cleaning machine re-circulates cleaning solvent.
- ❑ **Designate one gun for paint and another gun for primer**—Use virgin solvent to clean the paint gun, and then use the waste virgin solvent from the paint gun to clean the primer gun. This will reduce the total amount of solvent used for cleaning *and* reduce labor time involved with gun cleaning.
- ❑ **Clean up spills of solvent-containing materials immediately**—this prevents volatile compounds from evaporating into the air.
- ❑ **Clean equipment first with dirty solvent before final cleaning with virgin solvent**—for initial cleaning, the quality of the solvent does not need to be as high. Use a higher quality virgin solvent problem spots. This will reduce the total amount of solvent used.

- ❑ **Clean equipment immediately**—cleaning the spray equipment immediately reduces the problem of waste paint build-up and hardening in the lines and guns. This will reduce the total amount of solvent used for cleaning.
- ❑ **If you must use solvents, then optimize the current preparation process to minimize evaporation**:
  - Consolidate multiple steps into one step.
  - Reduce contamination of parts prior to cleaning.
  - Extend solvent "change-out" schedule with vendor.
  - Locate cleaning tanks away from heat sources.
  - Use less toxic solvent.
  - Keep tanks closed and well sealed.
  - Where practical, use a layer of water or wax to reduce evaporation.
  - Drain cleaned parts to return solvent to tank.
  - Turn off exhaust when not in use.
- ❑ **Use gun cleaning equipment that uses pressurized pulses of solvent and compressed air** — this new technology will reduce the total amount of solvent needed for cleaning.
- ❑ **Switch to alternative solvents:**
  - Water-based
  - Semi-water
  - Citrus
  - Soy-based

Ask a Toxics Reduction Engineer from Ecology for more options on solvent reduction. See *Appendix A* on page 77 for contact information.

- ❑ **Train employees to calculate precise mixing ratios of thinner to paint**—this will minimize the use of solvent.
- ❑ **Use hot spray method**—Heat decreases the viscosity of the coating, producing similar results to adding a solvent thinner, reducing the need for thinners.
- ❑ **Paint light colors before dark colors**—less gun cleaning is necessary when switching from light to dark colors.
- ❑ **Paint small parts together on a rack prior to coating**—this increases the transfer efficiency when coating is applied.
- ❑ **Spray edges and corners of parts first** so that the overspray hits uncoated areas of the part.
- ❑ **Minimize the use of any aerosol sprays**, especially those containing hazardous materials.
- ❑ Check out the **Emission Reduction Calculator** at the EPA *Design for the Environment* Web site to see how all of your changes reduce your emissions. You will find many useful tips there too. www.epa.gov/dfe/pubs/projects/auto/.