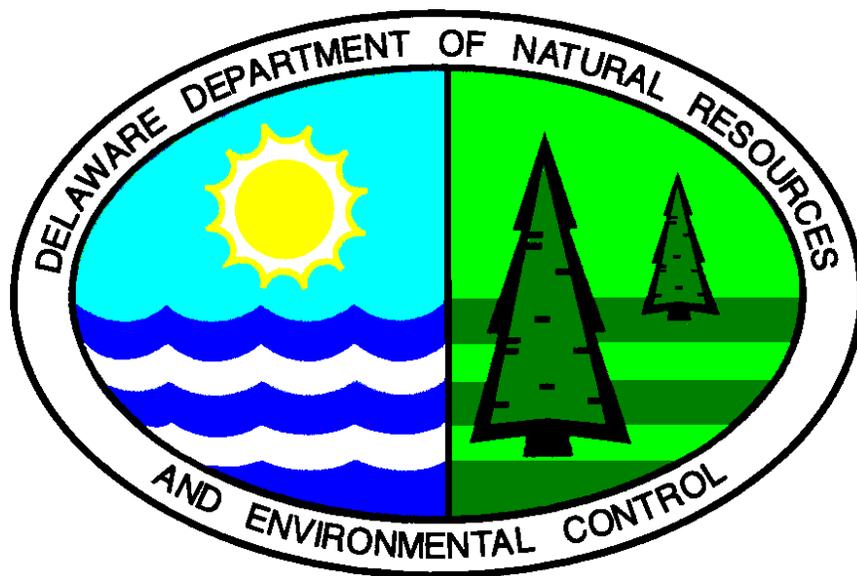


Compliance Assistance Workbook for the Auto Body Self-Certification Program



2004

Delaware Department of Natural Resources and Environmental Control

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Introduction

This workbook is part of the Delaware Department of Natural Resources and Environmental Control (DNREC) Auto Body Self-Certification Program. This workbook should be used along with the self-certification forms included in the back of this notebook.

Why should you read this workbook?

This workbook will help you:

1. Understand the main federal and state environmental requirements that apply to your shop;
2. Figure out if your shop is following environmental laws and regulations; and
3. Complete the Auto Body Self-Certification Form, if you wish.

How is this workbook organized?

This workbook has five chapters. Each chapter covers an important area that Delaware auto body shops should consider in trying to improve their environmental performance:

- Best Practices
- Hazardous Waste, Universal Waste, and Used Oil
- Solid Waste
- Air Pollution
- Industrial Wastewater

Each chapter provides you with information you need to know:

- Why is this environmental issue important?
- Do the requirements for this issue apply to your shop?
- What are the requirements?
- What do you need to know to fill out the self-certification form?
- What good ideas can you follow to take your shop beyond compliance?

Although this workbook looks long, you may not need to read all of the sections. For each chapter, read the introduction to find out which sections may apply to your shop. Also, you do not need to read the workbook all at once, or from beginning to end. Each chapter can be read separately in the order you choose. It is a good idea, though, to have the Auto Body Self-Certification Form handy as you read the workbook. That way you can fill out the Self-Certification questions as you read the relevant parts of the workbook.

Thanks for participating!

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Chapter 1: Best Practices for Auto Body Shops

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1.1 Pollution prevention: simple ways to save money and protect the environment

Pollution prevention means reducing waste and reducing the use of pollutants in your shop. Pollution prevention is usually the easiest and cheapest way to protect the environment and maintain a safe, healthy environment for you, your workers, and your neighbors. You can prevent pollution by reducing your use of dangerous materials, handling these materials carefully, and conserving water and energy. Since pollution can waste money and resources, preventing pollution can help you:

- Reduce operating costs of your business;
- Reduce waste disposal costs;
- Reduce long-term liability for environmental problems;
- Protect the environment;
- Improve workplace safety and health; and
- Project a positive public image to your customers and neighbors.

This chapter will show you how to prevent pollution in your shop. The next section in this chapter describes the top ten things you can do to improve your shop through pollution prevention. Then, this chapter lists "Do's and Don'ts" for materials you may have in your auto body shop. Finally, this chapter suggests how to recycle auto body shop materials so you have less waste to send for disposal. For additional tips, please call DNREC's Pollution Prevention Program at 302-739-6400.

1.2 Top ten tips for improving your shop

The following list describes ten very important things you can do to prevent pollution in your auto body shop. If you follow these ten tips, you will be well on your way to having a clean, safe, and efficient auto body shop. Be sure you also read the rest of this workbook to understand additional steps you must take to be in compliance with Delaware and federal law.

To prevent pollution from your auto body shop you should:

- 1 **Choose less toxic and polluting products.** Your materials supplier can help you find better materials to use in your shop. Ask your supplier to help you:
 - **Eliminate methylene chloride paint strippers.** Methylene chloride is a regulated hazardous waste that can cause cancer and worsen heart problems. The best way to avoid the risks and costs of dealing with methylene chloride is not to use it. Instead, you can remove paint from cars with a ventilated sander. If you have to use a chemical paint stripper, make sure it doesn't contain methylene chloride.
 - **Use low volatile organic compound (VOC) paints.** VOCs are chemicals that evaporate readily into the air from materials like paints and solvents. VOCs contribute to ground

level ozone, which is a public health concern (for example, ground level ozone can worsen asthma attacks). See Chapter 4 for a list of VOC limits.

- **Use water-based/low VOC cleaners and solvents.**
 - **Consider using waterborne primer and basecoat.** This technology is becoming more common in auto body shops as a way of replacing solvent-based paint systems. Though additional equipment, like heat lamps, is needed, waterborne coating technology can reduce pollution and make workplaces healthier.
 - **Make sure your yellow, orange, and red tints do not contain lead or lead chromates.** Lead is toxic and should be avoided wherever possible.
- 2 **Manage and store materials carefully.** Keep your shop organized and follow the good housekeeping tips described in this workbook. Only order the amount of materials you need to make sure your materials do not expire or become obsolete. It is a good idea to have just one person responsible for ordering materials and keeping track of inventories. Be sure you follow the requirements for hazardous and universal wastes and waste oil described in Chapter 2. These materials cannot be put in the regular trash. It is your responsibility to identify these wastes and handle them properly.
- 3 **Reduce your use of solvents.** Use an enclosed spray gun cleaner that recirculates solvent. This type of system reduces solvent fumes, the amount of solvent you need for cleaning spray guns, and the amount of solvent waste you generate. Also, do not use solvents to clean your hands or skin. Solvents can soak through your skin and make you sick. Instead, use a commercial soap solution made for paint cleanup purposes. Finally, reduce your use of solvents for cleaning up in your paint spray booth by using disposable masking over interior paint booth surfaces. Disposable masking materials include plastic and paper sheeting or peel/tacky coats. (But remember that disposable masking can be hazardous waste if your paint is hazardous. See Chapter 2 for more information.) If you have to clean up excess paint, scrape off as much as possible, and then use water-based or low VOC cleaners instead of concentrated solvent-based cleaners.
- 4 **Minimize exposures to auto body dust.** Sanding dust contains toxic metals such as lead and chromium that should be avoided. Most shops use disc sanders to remove paint/body filler compound from cars, and these sanders create dust that can be dangerous for workers and neighbors. The best way to minimize exposure to dust is to use a ventilated sander and to do sanding work in an enclosed space with a ventilation system. See Chapter 4 for more information on how to control dust from auto body work.
- 5 **Use High Volume Low Pressure (HVLP) spray guns.** You should use High Volume/Low Pressure (HVLP) spraying equipment in order to making your painting more efficient. HVLP spray guns can achieve a paint transfer efficiency of at least 65%, which means you will use less paint and have less waste. Training in how to use HVLP spray guns effectively will be offered as part of the workshops for the Delaware Self-Certification Program. Make sure you attend one of the workshops to get hands-on tips.

- 6 **Know where your wastewater goes.** In most cases, there are only two places where you are allowed to send wastewater from your shop operations: a public sewer or your septic system. In either case, you must make sure that you are meeting the requirements described in Chapter 5 of this workbook. (For example, if you are on a public sewer you must have a permit from your local sewage treatment plant, and if you are on septic you must have an oil/water separator for your septic system.) Remember there are some things that should *never* be flushed down a drain, such as flammable materials. Also, if you have a floor drain in your shop, it will have to be closed by April 2005, unless you meet certain requirements. The requirements for wastewater and floor drains are explained in Chapter 5 of this workbook.
- 7 **Train your workers.** Make sure your workers are trained in how to minimize overspray when painting. This will save paint and money and prevent air pollution. Each year, train employees to safely and properly handle hazardous waste. For example, workers should understand how to prevent spills by not overfilling containers and by using funnels with lids that are kept closed when not in use. Workers should also know what to do in case of a spill. Further information can be found in Chapter 2. Finally, give employees simple incentives to keep their work areas clean and minimize chemical use.
- 8 **Manage shop towels according to the law.** You should reduce the amount of paints and solvents on your shop towels as much as possible. Shop towels dripping with paints or solvents must be handled as hazardous waste. Towels that are only slightly dirty with paint or solvents can either be sent off-site for laundering at a properly licensed commercial laundry facility or disposed of as hazardous waste.
- 9 **Consider using paintless dent removal (PDR).** In certain applications, PDR can replace conventional refinishing, thereby reducing waste and pollution. As you may be aware, PDR is a purely mechanical process that uses special tools to restore sheet metal back to its original form by removing small dents, creases, and surface imperfections without the need for repainting. If PDR sounds right for you, call your local distributor for more information.
- 10 **Conserve energy and water.** Conserving energy and water will save you money and help protect the environment. Limit your use of wash water wherever possible, as described in Chapter 5. Also, turn off the lights when they are not in use and use energy efficient light bulbs. (But make sure you avoid buying light bulbs with high mercury content, as described in section 2.4 of this workbook.) When you buy new electrical equipment (e.g., computers or air conditioners), look for the ENERGY STAR symbol, which tells you that the equipment is energy efficient.



1.3 Do's and don'ts for common materials in auto body shops

The following table provides suggestions for how to properly manage materials commonly found in auto body shops. While not all the guidelines below are requirements, all are recommended practices. Requirements are described later in this workbook.

Material	DO:	DON'T:
ANTIFREEZE	<ul style="list-style-type: none"> ✓ Recycle your own antifreeze or use a recycling service. ✓ Consider keeping antifreeze in two separate, closed containers: one for antifreeze that can't be reused marked "WASTE ANTIFREEZE ONLY," and one for antifreeze that can be reused marked "USABLE ANTIFREEZE ONLY." ✓ Manage antifreeze recycling waste appropriately. If you recycle antifreeze on the premises, the filters and other recycling by-products may be a hazardous waste. ✓ If you have waste antifreeze you cannot recycle and you must discard, call DNREC's Small Business Assistance Program for help in finding legal disposal options (302-739-6400). 	<ul style="list-style-type: none"> ✗ Dispose of antifreeze to a septic tank or the sewer. ✗ Dispose of antifreeze to a storm drain, septic tank, or dry well, and never pour antifreeze on the ground. ✗ Mix waste antifreeze with any other waste. Keep it separate.
BRAKE FLUID	<ul style="list-style-type: none"> ✓ Recycle brake fluid. Brake fluid can be mixed with other used oils for recycling. ✓ Mark the container "used oil only." 	<ul style="list-style-type: none"> ✗ Put brake fluid down any drain or on the ground. ✗ Spray brake cleaner around brake fluid.
CAR BATTERIES	<ul style="list-style-type: none"> ✓ Send used lead-acid batteries to a battery manufacturer for regeneration or to a battery recycler. If you do this, your waste batteries will not be regulated as universal waste. Be sure to send off your batteries for recycling at least every six months. ✓ Store batteries upright in a secure, covered place and check them often for leaks. 	<ul style="list-style-type: none"> ✗ Store batteries outside. ✗ Store used batteries for more than six months. ✗ Put batteries in the garbage. ✗ Drain batteries into a drain or on the ground.

Material	DO:	DON'T:
CARB CLEANER	<ul style="list-style-type: none"> ✓ Consider eliminating chlorinated carb cleaner and switching to a less hazardous, non-chlorinated cleaner. ✓ Keep the container closed when not in use to avoid evaporation. ✓ When spent, label the container "HAZARDOUS WASTE - CARB CLEANER." 	<ul style="list-style-type: none"> ✗ Dispose of spent carb cleaner down any storm drain, septic system, dry well, or sewer. ✗ Put sludge from your carb cleaner into the dumpster or on the ground.
FREON (CFCs)	<ul style="list-style-type: none"> ✓ Recycle waste Freon on the premises using EPA certified recycling or recovery equipment. ✓ Keep records of the dates and amounts of onsite Freon recycling. ✓ Manage filters from Freon recovery equipment as hazardous waste. 	<ul style="list-style-type: none"> ✗ Evaporate or vent Freon. This is illegal.
FUEL FILTERS	<ul style="list-style-type: none"> ✓ Accumulate used fuel filters in a separate, marked, fireproof container. ✓ Determine through testing if your fuel filters are hazardous, and dispose of them accordingly. 	<ul style="list-style-type: none"> ✗ Put used fuel filters in the dumpster unless you have received approval from the Delaware Solid Waste Authority at 1-800-404-7080.
HOT TANK SOLUTION	<ul style="list-style-type: none"> ✓ Accumulate all sludge from hot tanks in a closed, marked container and dispose of as hazardous waste. ✓ Consider using alternative cleaning methods such as detergent-based parts washers. 	<ul style="list-style-type: none"> ✗ Dispose of spent hot tank solution down any drain or on the ground. ✗ Put hot tank sludge into the dumpster or on the ground.
PAINT	<ul style="list-style-type: none"> ✓ Mix paint only as needed. ✓ Reuse waste paint as a rough coat for other applications, such as undercoating. ✓ Apply tinted primers to reduce basecoat usage. ✓ Give excess paint to customers for use as touch-up paint rather than managing it as a hazardous waste. ✓ Separate waste paint and paint sludges from waste thinner. ✓ Reduce paint cup size on spray guns to reduce amount of wasted paint. 	<ul style="list-style-type: none"> ✗ Mix waste paint with other waste.

Material	DO:	DON'T:
PAINT SOLVENTS AND THINNERS	<ul style="list-style-type: none"> ✓ Place all waste paint solvent in a drum labeled "WASTE PAINT SOLVENT" and "HAZARDOUS WASTE." ✓ Make sure solvent is actually too dirty to use anymore before placing in waste container. ✓ Consider purchasing a spray gun cleaning unit that recirculates solvent. This reduces both the amount of solvent used and the amount of waste solvent generated. ✓ Consider purchasing your own solvent still and recycling solvent onsite for re-use. (Remember: still bottoms and sludges are hazardous waste, but this approach can substantially reduce the amount of hazardous waste you generate.) ✓ Decant waste thinner for reuse as a precleaning solvent for spray guns and other equipment, then use a small amount of fresh solvent for final cleaning. Paint thinners may be prolonged by using multiple cleaning steps, which may reduce spoilage of "clean" thinner baths. Waste thinners may also be recycled for use as a precleaning step for parts cleaning. ✓ Consider gently heating paint mixtures, which may reduce the amount of thinner needed. 	<ul style="list-style-type: none"> ✗ Dispose of spent solvents to drains, the air or the ground. ✗ Mix paint solvents with other waste. ✗ Evaporate solvents as a means of disposal. ✗ Place sludges from solvent stills in the garbage.

Material	DO:	DON'T:
PAINT SPRAY BOOTH FILTERS	<ul style="list-style-type: none"> ✓ Always use spray booth filters. Reusable metal or styrofoam paint booth filters are best. ✓ Always make sure that the filters are installed properly and cover all openings. ✓ Consider using cheaper pre-filters to prolong the life of filters. ✓ Change filters only when needed. ✓ If you use lead-based paints, make a hazardous waste determination so you know whether you have to dispose of spray booth filters as hazardous waste. (See Chapter 2 for more information.) ✓ Non-hazardous filters can be disposed of with the Delaware Solid Waste Authority, if you have written approval. Call 1-800-404-7080 for more information. 	<ul style="list-style-type: none"> ✗ Use a spray booth without a filter. ✗ Use a spray booth with the wrong type of filter. ✗ Dispose of spray booth filters used with lead-based paint until you have made a hazardous waste determination.
SHOP TOWELS	<ul style="list-style-type: none"> ✓ Use cloth towels that can be cleaned and reused. ✓ Use less hazardous cleaning solvents (ones without chlorinated compounds) when possible. ✓ Use a commercial laundry/recycling facility that is meeting local sewer discharge limits. ✓ Keep waste shop towels in a closed container marked "CONTAMINATED SHOP TOWELS ONLY". 	<ul style="list-style-type: none"> ✗ Throw dirty towels into your dumpster. ✗ Saturate towels. If you do, wring them out and reuse the liquid or dispose of the liquid properly. ✗ Use disposable paper towels or rags if you can avoid it. ✗ Dispose of solvents by pouring them into containers of used shop towels. ✗ Use a laundry facility or recycler that discharges its wastewater to a drain field (septic tank).

Material	DO:	DON'T:
SOLVENT TANKS AND OTHER SOLVENTS	<ul style="list-style-type: none"> ✓ Consider using less hazardous solvents or switching to a spray cabinet parts washer that doesn't use solvent. ✓ Consider purchasing your own solvent still and recycling solvent onsite. (Sludges, filters and still bottoms generated from onsite solvent recycling are typically hazardous.) ✓ Make sure solvent is actually too dirty to use anymore before it is exchanged for new solvent. ✓ If you recycle onsite, keep a log of dates, recycled amounts and batch make-up amounts. ✓ Install a filter on your solvent sink to greatly increase the life of the solvent (but remember to dispose of the filters as a hazardous waste). ✓ Keep different types of solvents in separate, labeled, closed containers. ✓ Consider using dry ice for cleaning. Dry ice freezes dirt and the dirt comes right off. 	<ul style="list-style-type: none"> ✗ Dispose of spent solvents to drains, the air, or the ground. ✗ Mix solvents with any other waste. ✗ Keep or handle solvents near used oil. ✗ Evaporate solvents as a means of disposal.
SPRAY CABINET WASH WATER AND SLUDGE	<ul style="list-style-type: none"> ✓ Consider switching to a spray cabinet system for parts cleaning. ✓ Determine through testing whether your spray cabinet wastes are hazardous. ✓ Skim off oil from spray cabinet wash water and put it in your used oil container. ✓ Close off any drains leading to storm sewers, dry wells, or septic systems. ✓ Store spray cabinet sludge in sturdy, closed containers and dispose of it as a hazardous waste if necessary. ✓ Get permission from your local sewer utility before any wash water enters the sewer. 	<ul style="list-style-type: none"> ✗ Dispose of spray cabinet wash water down any storm drain, septic system or dry well. This can lead to water contamination and liability problems for you. ✗ Put spray cabinet sludge into the dumpster or on the ground.

Material	DO:	DON'T:
SPRAY CANS	<ul style="list-style-type: none"> ✓ Consider phasing out spray cans in your shop. ✓ When you are using up a spray can, turn it upside-down to keep the nozzle from clogging. ✓ Use up an entire spray can before starting another. ✓ If a spray can malfunctions (for example, the tip breaks off), handle as hazardous waste or consider returning it to your supplier. ✓ Empty spray cans are considered hazardous waste unless punctured (in a commercially available spray can puncturing device) and the empty cans are recycled as scrap steel/metal. ✓ Any filters associated with a spray can puncturing device may be hazardous waste. ✓ The liquids collected within the spray can puncturing device or associated container may be hazardous waste. 	<ul style="list-style-type: none"> ✗ Throw any spray cans into the dumpster. ✗ Empty the can by just spraying it into the air without actually using the product.
SUMP SLUDGES	<ul style="list-style-type: none"> ✓ Have the sludge tested when pumped out. Keep all records. ✓ If the sludge is a hazardous waste, send it to a hazardous waste management facility. 	<ul style="list-style-type: none"> ✗ Put hazardous sludge in the dumpster, on the ground, or in your septic tank. ✗ Use a septic tank pumping service to remove sump sludge. There is no legal, environmentally safe way for these services to dispose of the waste if it is hazardous.
TRANSMISSION FILTERS	<ul style="list-style-type: none"> ✓ Remove oil by draining for 24 hours. ✓ Keep drained filters in a container marked "USED TRANSMISSION FILTERS ONLY" and locate an oil filter recycler who will take them. ✓ Put oil drained from filters in your "USED OIL ONLY" container. 	<ul style="list-style-type: none"> ✗ Put any filters in the dumpster.

Material	DO:	DON'T:
USED OIL, including TRANSMISSION FLUID AND OTHER CRUDE-BASED FLUIDS	<ul style="list-style-type: none"> ✓ Keep used oil in a separate container marked "USED OIL ONLY". ✓ Place your container in a secure area and train your technicians to keep it secure. ✓ Make sure used oil is tested to be "on spec" if you receive (or give) oil for burning from another business. ✓ Keep records of used oil testing and shipments. ✓ Contact the Solid and Hazardous Waste Management Branch at 302-739-3689 and the Air Quality Management Section at 302-739-4791 before using a used oil burner. 	<ul style="list-style-type: none"> ✗ Dispose of used oil to a storm drain, septic tank, dry well, sewer or dumpster. ✗ Contaminate used oil by mixing it with even small amounts of brake cleaner or carb cleaner. This could turn the whole load into a hazardous waste. ✗ Pour used oil on the ground, even for dust suppression. ✗ Mix used oil with incompatible wastes such as used antifreeze. ✗ Mix your used oil or "do-it-yourselfer" used oil with any other waste if you plan to burn it in your shop for heating.
USED OIL FILTERS	<ul style="list-style-type: none"> ✓ Remove oil by puncturing filter and draining for 24 hours. ✓ Keep drained filters in a separate container marked "USED OIL FILTERS ONLY". ✓ Put oil drained from filters into your "USED OIL ONLY" container. ✓ Use the free oil filter recycling program provided by the Delaware Solid Waste Authority. This program will set up a 55-gallon drum at your shop for used oil filters and pick them up at no cost to you. To participate in the program, call 1-800-404-7080. 	<ul style="list-style-type: none"> ✗ Put any filters in the dumpster.

Material	DO:	DON'T:
WASTEWATER	<ul style="list-style-type: none"> ✓ Avoid contaminating water with shop waste. ✓ Use dry methods, like sweeping and vacuuming, to clean your shop floor. ✓ Catch leaks before they hit the floor and place in an appropriate waste container. ✓ Clean small, non-hazardous spills immediately with absorbent. Sweep and save for reuse until absorbing ability is gone. Absorbent can then go in the dumpster with Delaware Solid Waste Authority approval. For approval, call 1-800-404-7080. ✓ Use absorbent pads and wring out to appropriate waste container when saturated. 	<ul style="list-style-type: none"> ✗ Use absorbents to clean up hazardous wastes (like chlorinated solvents) and then dispose to the dumpster. These absorbents must be properly disposed of as hazardous wastes. ✗ Let wastewater go to an outside or inside storm drain or dry well.

1.4 Recycling auto body shop materials

The only requirements for recycling relate to servicing air conditioners. Other recycling practices can also save you money while helping protect the environment.

REQUIREMENTS FOR RECYCLING
<p>You must recycle Freon (chlorofluorocarbons, or CFCs) from air conditioning units:</p> <p>Do:</p> <ul style="list-style-type: none"> ✓ Recycle refrigerant for reuse on-site or send recovered refrigerant to an EPA-approved reclaimer. ✓ Use EPA-approved equipment for recycling. For more information and detailed fact sheets, call EPA Stratospheric Ozone Hotline at 1-800-296-1996. ✓ Review additional requirements for handling Freon/CFCs in Section 4.8 of this workbook.

The best management practices below list some additional good ideas for recycling.

GOOD IDEAS

Do:

- ✓ **Consider purchasing a solvent recycler.** If your shop generates large quantities of spent spray gun cleaning solvent, then you may be losing money if you don't have a solvent recycling system. For example, suppose your shop generates 15 gallons per week (780 gallons per year) of waste solvent with \$5 per gallon purchase cost and \$9 per gallon disposal cost. Then a \$3,700 solvent recycling system (with a 90% recovery rate) would save you more than \$5,000 in the first year alone. Using a solvent recycler may also help you reduce your hazardous waste use, which may give you a better hazardous waste generator status with fewer regulatory requirements.
- ✓ **Recycle/reuse antifreeze.** You can filter and reuse antifreeze yourself, or send it off to a recycling service. Remember that filters and other recycling by-products may be hazardous waste.
- ✓ **Recycle car batteries.** You can often get paid a small sum (about \$5) for each battery you recycle. And if you recycle batteries they will not be considered hazardous waste. But you must make sure you store your batteries correctly (in a secure, covered location) and check them for leaks. Send them off to a reclaimer at least every six months.
- ✓ **Recycle used oils and oil filters.** You may be able to obtain information about oil recycling from the National Oil Recyclers Association (NORA) at 703-753-4277 or www.noranews.org. For oil filters, the Delaware Solid Waste Authority (DSWA) provides a free recycling service. Call DSWA's Citizens' Response Line at 1-800-404-7080 to join. DSWA will provide your shop with a 55-gallon drum for used oil filters and arrange a pick-up schedule that's convenient for you, free of charge.
- ✓ **Recycle fluorescent/high-intensity discharge lamps.** See Appendix 1 for a list of recyclers. Note that even if you send your lamps for recycling, they may still be classified as hazardous waste, so you should handle them according to the guidelines in Chapter 2.
- ✓ **Recycle computer systems and monitors, or donate for reuse.** Computer systems and monitors contain components that must be managed as hazardous waste if they are disposed of. The Delaware Solid Waste Authority (DSWA) has an electronic goods recycling program. Contact DSWA at 1-800-404-7080 for more information or to schedule a drop off. Your donation may be tax deductible.
- ✓ **Recycle metals, plastics, glass, paper and cardboard.** You might want to use a trash compactor to compress cardboard and waste paper for offsite recycling.
- ✓ **Purchase used materials or items made of recycled material where you can.**

1.5 Energy conservation

Saving money is important to all businesses, but especially small businesses, like auto body shops, where the need to stay competitive is crucial for survival. One strategy for maintaining a competitive business is energy management. High-profile energy issues, such as the rising cost of oil and the Northeast blackout of 2003, have increased everyone's concern over the stability of our energy sources. Managing your energy usage can help decrease energy demand and pollution generation while it saves your business money.

There are many energy saving things you can do that have little or no cost to you, but can save you hundreds to thousands of dollars every year. You can combine many of the efforts with standard maintenance projects like replacing light bulbs or buying new office equipment. In addition, many of the improvements you make have a very quick return on your investment. By reducing your energy consumption, you are helping to reduce the amount of fossil fuels that are burned for power generation. As a result, you are decreasing air pollution and becoming a good steward to the environment. Energy efficiency also gives your business these other indirect benefits:

- Improved employee productivity due to enhanced comfort and lighting levels.
- Reduced operations and maintenance expenses
- Protection from energy inflation
- Enhanced public image for your business as a Steward of the Environment

Helping the environment is great, but increasing your bottom line is even better, right? Well, the following Energy Conservation Good Ideas will help you to conserve Delaware's precious natural resources AND increase your profits.

GOOD IDEAS

Do:

- ✓ **Turn off lights and equipment when they are not in use.**
- ✓ **Use programmable thermostats or adjust thermostats when a space is unoccupied.** Using a programmable thermostat can save you more than \$100 in your yearly utility bills.
- ✓ **Replace incandescent light bulbs with compact fluorescent bulbs, which last much longer and use much less energy.** Compact fluorescent bulbs cost about 75 percent less to operate, and last about 10 times longer.
- ✓ **Clean or replace your air filters in your heating and cooling systems, every three months, or monthly during peak heating and cooling periods.**
- ✓ **Use fans to improve air circulation and employee comfort, instead of turning that thermostat down another degree.** Each degree of higher temperature can save you about 3 percent on cooling costs.
- ✓ **Install an ENERGY STAR ceiling fan to circulate air in summer and pull hot air down in winter.** An ENERGY STAR ceiling fan is 20 percent more efficient than standard fans and can save you about \$25 per year on running costs, in addition to the money it saves you in heating and cooling.
- ✓ **Caulk and weather-strip windows and exterior doors to prevent leaks.**
- ✓ **Install motion-sensor lighting in areas used infrequently, such as bathrooms or break rooms.**
- ✓ **Buy ENERGY STAR qualified office equipment, HVAC systems, refrigerators, and other products when needed.** For a complete listing of products, go to www.energystar.gov/products.

- ✓ **Partner with the ENERGY STAR for Small Business program.** It's free and they provide you with unbiased information and support. (It also projects a great image to your customers!) Go to www.energystar.gov/smallbiz for more information.
- ✓ **Get help from the Delaware Energy Office.** Visit www.delaware-energy.com or call the Delaware Energy Office at 302-739-1530 to get support for your energy conservation efforts and to find more energy saving advice. The Delaware Energy Office can help you to find rebate opportunities on alternative power sources, as well.

1.6 Reporting releases of petroleum products or chemicals

The State of Delaware requires that your shop report any releases of petroleum products and chemicals (like solvents contained in paint thinner and paints) to the environment. You can report releases by calling the Department of Natural Resources and Environmental Control (DNREC) phone line 1-800-662-8802 and reporting the substance and approximate quantity spilled.

When you are finished reading this section, you should be able to answer the following questions on the Auto Body Self-Certification Form:

1. Has your shop had any releases of petroleum products or chemicals to the environment in the last 12 months?
2. If yes, have you reported those releases to DNREC?

Any petroleum product, paint, or paint thinner that leaks into surface water or groundwater must be reported. This includes releases to asphalt or concrete surfaces that drain to storm sewers or surrounding soil. Small discharges or releases inside a building are exempt from reporting if the discharge does not immediately or eventually result in a release to the outside environment. That means small spills of paint, paint thinner or petroleum products inside a building, appropriately cleaned up, are exempt from reporting.

REQUIREMENTS FOR REPORTING RELEASES

You must report all releases of petroleum products and chemicals to the environment. This means you:

Do:

- ✓ Call DNREC at 1-800-662-8802 to report the substance and approximate quantity spilled. This includes petroleum products, paints and paint thinners.

Chapter 2: Hazardous Waste, Universal Waste, and Used Oil

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2.1 Hazardous waste determination

Do you generate "hazardous waste"? You may without knowing it. "Hazardous waste" is a legal term that means specific types of waste that are regulated under state and federal law. Parts cleaning, painting, and other activities in your shop can produce wastes that are legally defined as hazardous. For example, common hazardous wastes in auto body shops include waste paint and sludge (or "bottoms") from stills that recycle solvents. Some raw materials, such as paints, that have expired or that you do not intend to use may also become hazardous wastes.

Under Delaware law, if you generate hazardous waste you have "cradle-to-grave liability," which means you are responsible for your waste even if other companies handle and dispose of it for you. You must determine whether your shop's wastes are classified as hazardous waste and take responsibility for handling and disposing of your wastes according to the law.

This section will help you:

- Identify what types of wastes you generate and whether they are defined as hazardous;
- Measure the amount of hazardous waste your shop generates and accumulates; and
- Determine your hazardous waste "generator status," which tells you what requirements you have to meet in managing your hazardous waste.

After reading this section, you will know whether your shop is a "Conditionally Exempt Small Quantity Generator" of hazardous waste (CESQG), a "Small Quantity Generator" of hazardous waste (SQG), a "Large Quantity Generator" (LQG), or not a generator at all.

- If you are a CESQG, you should read Section 2.2 of this workbook to find out what you must do to handle your hazardous waste. Then skip to Section 2.4 and continue reading.
- If you are an SQG, you should read Section 2.3 for your requirements. Then continue reading Section 2.4.
- If you are a LQG, you will need to contact the Delaware Department of Natural Resources and Environmental Control (DNREC) Solid and Hazardous Waste Branch at 302-739-3689 before continuing. This workbook is not designed for LQGs.
- If after reading this section you find you do not generate any hazardous waste, you can skip directly to Section 2.4.

When you are finished reading this section, you should be able to answer the following questions on the Auto Body Self-Certification Form:

1. Does your shop generate any of the materials listed in the Hazardous Waste Determination Table?
2. Have you conducted a complete and accurate hazardous waste determination for each waste stream your shop generates?

3. Does your shop generate any hazardous wastes?
4. Does your shop track how much total hazardous waste you have on your property at any one time?
5. What is your hazardous waste generator status?

2.1.1 How can you tell if your wastes are hazardous?

This section will walk you through a step-by-step process of identifying what wastes your shop generates and which of those are "hazardous waste." As you read this section, you will need to refer to the Hazardous Waste Identification Worksheet, on page 2-9. This worksheet lists all of the common wastes from auto body shops that are or might be hazardous waste. Each of the three steps in this section will instruct you about how to fill out one of the columns in the Hazardous Waste Identification Worksheet. When you have finished all three steps, you should have a list of all of the hazardous wastes you generate and the amount of each one that you generate. With this information in hand, you can turn to Section 2.1.2 to determine your hazardous waste generator status.

Step 1: Identify which wastes you generate.

Turn to the Hazardous Waste Identification Worksheet on page 2-9. Read down the column on the far left ("Type of Potentially Hazardous Waste"), and look for the types of waste that your shop generates.

- ☞ Put a check in Column 1 of the Hazardous Waste Identification Worksheet for each type of waste that your shop has generated in the previous 12 months.

Step 2: For each of the types of waste you checked off in Step 1, determine whether the waste is classified as hazardous.

You are required to find out if any of the wastes your shop generates are considered hazardous. Wastes generated from your shop are considered to be hazardous wastes if:

- They demonstrate dangerous characteristics, including ignitable, corrosive, reactive and toxic (a **characteristic hazardous waste**), or
- They are listed by the U.S. Environmental Protection Agency (a **listed hazardous waste**),
- They are a **mixture of solid waste and hazardous waste** that are listed wastes or characteristic wastes. Some examples are: cleaning rags that are soaked with toxic solvents, still bottoms from solvent recycling, kitty litter used to clean up a hazardous waste spill, and dirt that has been contaminated with hazardous waste.

For each type of waste you checked off in Step 1, look at Column 2, "Is waste classified as hazardous?" Wastes at the top of the table (rows 1 - 18) are always hazardous, so column 2 is

already filled in with the answer "YES." **If you only checked off wastes in rows 1-18, you can skip to Step 3.**

However, if you checked off other wastes in rows 19 - 29, where Column 2 is blank, you are generating *potentially* hazardous wastes. In these cases, you have to fill out Columns 3 and 4. This involves determining whether your wastes are, in fact, hazardous, and explaining how you made that determination. For each type of potentially hazardous waste you have generated in rows 19-30, you can determine whether it is hazardous by reviewing Appendix 2. Appendix 2 shows the list of potentially hazardous waste that are listed in the Hazardous Waste Identification Worksheet, explains the ingredients and hazardous characteristics of each type of waste, and tells you how you can determine if a potentially hazardous waste (those marked "maybe") is, in fact, hazardous.

☞ **For each type of potentially hazardous waste** you have generated in the previous 12 months (rows 19-29 that have a check in Column 1), review Appendix 2 and then:

Mark down "Yes" in Column 2 if you have determined the waste is, in fact, hazardous.

Mark down "No" in Column 2 if you have determined the waste is not hazardous.

For each potentially hazardous waste you generate, you also must explain *how* you made the waste determination. For example, you can determine whether your wastes are hazardous through your knowledge of process and materials, by reviewing Materials Safety Data Sheets (MSDSs), or by testing a representative waste sample.

☞ **For each type of potentially hazardous wastes you have generated** in the previous 12 months, write down in Column 3 the number of the method you have used to determine whether it is hazardous:

Mark down "1" if you determine the waste as hazardous by using your knowledge of process and materials

Mark down "2" if you have reviewed the MSDS or the product label for ingredients and for warning of dangerous characteristics (e.g., ignitability, corrosivity, reactivity, and toxicity)

Mark down "3" if you have tested a representative sample of the waste

Mark down "4" if you have used other methods, such as consulting your hazardous waste management vendors or asking DNREC.

Step 3: Record the maximum monthly amount of each hazardous waste generated and amount of hazardous waste accumulated on site.

☞ **For each type of hazardous wastes you have generated**, enter the maximum amount you have generated in any single month within the past 12 months in Column 4 of the Hazardous Waste Identification Worksheet. The maximum monthly amount should reflect the amount of hazardous waste you generate in peak months. If the number of cars your shop repairs is about the same every month, you can enter the amount of waste you generated last month in Column 4.

If your maximum monthly generation number you are reporting is in pounds, convert it into gallons by dividing the number by 8 (see Column 4).

- ☞ **For each type of wastes you have generated**, enter the total amount of hazardous waste accumulated on your property at any one time in Column 5. If the accumulation amount you are reporting is in pounds, convert it into gallons by dividing the number by 8 (see Column 5).

Please note that the conversion factor of 8 is only an estimate provided for the convenience of most shops, and may not be precise enough for your particular shop to determine its generator status. If you are close to the threshold level for any generator status, you will need to use more exact numbers to convert pounds into gallons. Precise conversion factors for each kind of hazardous waste can be developed using Materials Safety Data Sheets (MSDS). Please call the Office of Pollution Prevention and Compliance Assistance at 302-739-6400 if you have any questions.

Remember, changes in the materials you use or your shop's procedures may change your waste, so you should re-evaluate your wastes each year by filling out the Hazardous Waste Identification Worksheet when you complete a Self-Certification Form. This will help make sure that you have correctly determined your shop's generator status.

2.1.2 Determining your hazardous waste generator status

After you have completed Column 4 and Column 5 for the Hazardous Waste Identification Worksheet, you will know the total maximum monthly amount of each hazardous waste you generate and the total amount accumulated in your shop for each waste.

- ☞ Add the maximum monthly amount generated and accumulated for all of your hazardous wastes **IN GALLONS**, and enter the total at the bottom of the Hazardous Waste Identification Worksheet (in row 30). If you have not converted amounts into gallons, do so now before you add up the total amount.

The maximum amount of hazardous waste you generate in any one month, and the total amount of hazardous waste you have accumulated on your property at any one time, are two key factors in determining your hazardous waste generator status. There is a final consideration in determining your generator status:

- You must consider the amount of acute hazardous waste you have accumulated on site. Most auto body shops do not have acute hazardous waste, but if you handle solvents with carbon disulfide or pyridine, call the DNREC Solid and Waste Management Branch at 302-739-3689 to see if you might be generating acute hazardous waste.

The following table summarizes the various limits for each of the three categories of hazardous generators:

	CESQG (Conditionally Exempted Small Quantity Generators)	SQG (Small Quantity Generators)	LQG (Large Quantity Generators)
Maximum Amount of Hazardous Waste Generated in <u>any calendar month</u>	Less than 25 gallons (220 pounds)	25 - 300 gallons (220-2,200 pounds)	More than 300 gallons (2,200 pounds)
Amount of Hazardous Waste Accumulated at any one time	Less than 300 gallons (2,200 pounds)	Less than 1,595 gallons (13,000 pounds)	No limit

Fill out the table under Question 5 in the Hazardous Waste Section of the Auto Body Self-Certification Form to determine your generator status. If you find that you are close to the threshold level for any generator category, please note that the conversion factor of 8 is only an estimate provided for the convenience of most shops, and may not be precise enough for your shop to convert pounds to gallons. You will need to use more exact numbers to convert pounds into gallons. Precise conversion factors for each kind of hazardous waste can be developed using Material Safety Data Sheets (MSDS). Please call the Office of Pollution Prevention and Compliance Assistance at 302-739-6400 if you have any questions.

Remember, it is a good idea to keep track of the amount of hazardous waste you have accumulated on site, so that you can be sure you don't accidentally end up in a generator category (e.g., SQG) with more requirements.

What to do next:

- If you are a CESQG, use Section 2.2 to help you fill out the Auto Body Self-Certification Form. Then skip to Section 2.4 and continue reading.
- If you are an SQG, use Section 2.3 to help you fill out the Auto Body Self-Certification Form. Then continue reading Section 2.4.
- If you are a LQG, please contact DNREC's Solid and Hazardous Waste Branch at 302-739-3689 before continuing. This workbook is not intended for LQGs. The DNREC office will provide you with appropriate information and assistance.
- If you do not generate any hazardous waste, skip direction to Section 2.4.

2.1.3 Hazardous waste identification worksheet

Fill in the following table by referring to the steps outlined in Sections 2.1.1 and 2.1.2 in the Compliance Assistance Workbook. You will fill in the table column-by-column, beginning on the left-hand side of the table. Cells that are shaded do not need to be filled in. Note that in Columns 4

and 5, if you only know the amount of wastes in pounds, you need to convert that amount to gallons. You can divide the number of pounds by 8 to get the number of gallons. When you have filled out each column, add the number of gallons for Column 4 and 5 and enter the result at the bottom of the table, in Row 30.

Please note that the conversion factor of 8 is only an estimate provided for the convenience of most shops, and may not be precise enough for your particular shop to determine its generator status. If you are close to the threshold level for any generator status, you will need to use more exact numbers to convert pounds into gallons. Precise conversion factors for each kind of hazardous waste can be developed using Materials Safety Data Sheets (MSDS). Please call the Office of Pollution Prevention and Compliance Assistance at 302-739-6400 if you have any questions.

Hazardous Waste Identification Worksheet

	Type of Potentially Hazardous Waste	Column 1	Column 2	Column 3	Column 4			Column 5		
		Is waste generated?	Is waste classified as hazardous?	How did you determine hazardous waste determination?	Maximum Monthly Generation			Total Amount Accumulated On Site at Any One Time		
		Check If YES	Answer either "YES" or "NO"	1. Using your knowledge 2. Reviewing MSDS/product label 3. Laboratory testing 4. Other methods	Lbs.	÷8 =	Gallons	Lbs.	÷8 =	Gallons
1	Waste or expired oil- (solvent-) based paint		YES							
2	Sludge or bottoms from a solvent recycle or still that recycles paint gun cleaner or thinner		YES							
3	Sludge or bottoms from parts washers/filters		YES							
4	Sludge or bottoms from coolant or antifreeze filters/stills		YES							
5	Sludge or bottoms from hot dip tanks		YES							
6	Methylene chloride paint sludge stripped from vehicles		YES							
7	Paint thinners		YES							
8	Paint gun cleaning solvent		YES							
9	Solvent Degreasers		YES							
10	Parts washing fluid		YES							
11	Immersion cleaners		YES							
12	Mineral spirits (including petroleum naphtha)		YES							
13	Brake cleaner		YES							
14	Carburetor cleaner		YES							
15	Methylene chloride paint stripper		YES							
16	Mercury switches		YES			÷8 =			÷8 =	
17	Absorbent materials, such as Speedi-Dry, contaminated with hazardous waste		YES			÷8 =			÷8 =	

		Column 1	Column 2	Column 3	Column 4			Column 5		
	Type of Potentially Hazardous Waste	Is waste generated?	Is waste classified as hazardous?	How did you determine hazardous waste determination?	Maximum Monthly Generation			Total Amount Accumulated On Site at Any One Time		
		Check If YES	Answer either "YES" or "NO"	1. Using your knowledge 2. Reviewing MSDS/product label 3. Laboratory testing 4. Other methods	Lbs.	÷8 =	Gallons	Lbs.	÷8 =	Gallons
18	Waste aerosol cans with residual contents of hazardous materials (unless punctured/drained and sent for scrap metal recycling)		YES			÷8 =			÷8 =	
19	Waste paint booth filters					÷8 =			÷8 =	
20	Waste masking paper or tape contaminated with paint					÷8 =			÷8 =	
21	Waste sanding dust					÷8 =			÷8 =	
22	Oil/water separator sludge									
23	Oil/water separator overflow									
24	Floor wash/rinse waters discharge									
25	Wastewater from a water-based parts cleaner									
26	Electronics/ computers (if not sent for reuse)					÷8 =			÷8 =	
27	Shop towels/rags contaminated with hazardous waste					÷8 =			÷8 =	
28	Waste gasoline									
29	Waste coolant/ antifreeze									
30	Totals (sum amounts generated and accumulated)									

If: { 1) the total maximum monthly generation shown above is less than 25 gallons }
AND
{ 2) the total amount accumulated on site shown above is less than 300 gallons }

THEN YOUR SHOP IS A CESQG. If not, review section 2.1.2 for further information.

2.2 CESQGs: How to manage your hazardous waste

Review this section of the workbook if you generate hazardous waste and are a **Conditionally Exempt Small Quantity Generator (CESQG)**.

- If you do not generate hazardous waste, skip to Section 2.4.
- If you do generate hazardous waste and are an SQG, skip to Section 2.3.
- If you are not sure if your shop is a CESQG, review and complete Section 2.1.

This section contains information on the requirements and good ideas for managing hazardous waste at a CESQG shop. Each topic provides you with information on what you must do to comply with the regulations as well as practices that are recommended but not required for managing hazardous waste at CESQG shops.

When you are finished reading this section, you should be able to answer the following questions on the Auto Body Self-Certification Form:

6. Are all hazardous waste containers properly labeled?
7. Are all containers holding hazardous waste managed to prevent or minimize release?
8. Is the accumulation area inspected weekly for signs of spills or container deterioration?
9. Does your shop send all hazardous wastes to a permitted hazardous waste treatment, storage, or disposal facility or a state authorized facility?
10. Does your shop have a program that trains employees who handle hazardous waste in proper waste management procedures?

2.2.1 Labeling containers

Containers holding hazardous waste must be appropriately labeled. This section will help you comply with labeling requirements.

REQUIREMENTS FOR LABELING CONTAINERS

You must make sure all your hazardous waste containers are properly labeled. This means you:

Do:

- ✓ Always label all containers and tanks holding hazardous waste with the words "HAZARDOUS WASTE." Hazardous waste containers in satellite accumulation areas should also always be labeled either with the words "HAZARDOUS WASTE" or with other words that say what is in the container.

In addition to the requirements above, the following Best Management Practices (BMPs) are good ideas for labeling your hazardous waste containers.

GOOD IDEAS

Do:

- ✓ In addition to labeling containers with the words "HAZARDOUS WASTE," list the specific contents of each container, such as "WASTE PAINT SOLVENT," on the label. Store each kind of waste in a different container. This will help you avoid putting incompatible wastes in the same container.
- ✓ Mark each container with the date that you started storing hazardous waste in that container.

2.2.2 Managing containers

Hazardous wastes must be stored in appropriate containers and handled carefully. This section will help you manage and handle your hazardous waste containers to prevent leaks, spills, and explosions.

REQUIREMENTS FOR MANAGING HAZARDOUS WASTE CONTAINERS

You must manage hazardous waste containers to prevent wastes from leaking, spilling, or exploding. This means you:

Do:

- ✓ Always keep container lids and bung holes closed, except when you are filling or emptying the container. Funnels with lids are OK, so long as the lids are kept closed when not in use. If you have hazardous waste tanks, always keep their lids closed as well.
- ✓ Keep your storage containers in good shape, with no leaks, corrosion, rust, or bulges. If a container is not in good condition or is leaking, transfer the hazardous waste into a container that is in good condition.
- ✓ Open, handle and store hazardous waste containers carefully to prevent them from rupturing and to prevent the waste from leaking or spilling. Use caution when you move containers, and protect them from moving vehicles.
- ✓ Store wastes in containers that are compatible with the waste (so the wastes will not dissolve, corrode, or react with the container itself), or use containers with compatible liners. Steel drums approved by the US Department of Transportation should be used for all paints, thinners, gun cleaners, and paint strippers. Acid wastes should be stored in plastic containers, not metal drums.
- ✓ Keep containers holding wastes that could react with each other separate.
- ✓ Store rags and any other materials that may have touched solvents or paint strippers in closed, airtight containers. Leaving dirty, solvent-soaked rags lying around can cause a fire or explosion if fumes from the rags come in contact with a spark.

In addition to the requirements above, the following Best Management Practices (BMPs) are good ideas to help prevent hazardous wastes from leaking, spilling, or exploding.

GOOD IDEAS

Do:

- ✓ Only use steel drums approved by the US Department of Transportation for all paints, thinners, gun cleaners, and paint strippers. Acid wastes should be stored in plastic containers, not metal drums.

- ✓ Separate containers by a physical barrier (like a dike, berm, or wall) or by spacing the containers far apart.
- ✓ Store only one type of hazardous waste in one container. Mixing wastes can cause dangerous reactions and makes waste disposal more expensive and difficult. For example, you should never store acids (like battery acid) and bases (like alkaline rust remover) in the same container or cabinet. Keep liquid wastes separate from other wastes.
- ✓ Store all containers far enough apart so that you have room to inspect them thoroughly.
- ✓ Store containers on a surface that will prevent and contain spills and leaks, such as a small concrete pad and berm, or a commercially available containment pallet or tray.
- ✓ Store containers inside, in an area protected from the weather, on a raised platform to prevent flooding.
- ✓ Properly dispose of containers that have stored hazardous wastes you no longer generate and are not compatible with the hazardous wastes you are generating.
- ✓ Lock your storage area to keep it secure.
- ✓ Use a ground strap on metal drums to avoid sparks from static electricity.

Don't:

- ✗ Let your containers leak, rust, or get damaged.
- ✗ Let rainwater accumulate on the top of drums.
- ✗ Allow smoking near hazardous wastes.

2.2.3 Accumulating and storing hazardous waste

You may only store a limited amount of hazardous waste at your shop, for a limited amount of time. This section will help you understand requirements for hazardous waste accumulation and storage.

You should have a centralized place for storing hazardous waste in your shop that is secure and protected from the weather. If you generate small amounts of hazardous waste throughout your shop, you may store these wastes close to where you generated the waste, in what are called "satellite accumulation areas." A satellite accumulation area simply means a place where you store waste as you work, before you move the waste to a central location in your shop.

REQUIREMENTS FOR ACCUMULATING AND STORING HAZARDOUS WASTE

You must keep within the limits for how much waste you can store at your shop. This means you:

Don't:

- × Accumulate more than 300 gallons (2,200 pounds) of hazardous waste on your property. If you store more than this amount, your generator status will change and you will have to comply with more requirements.

In addition to the above requirement, the following Best Management Practices (BMPs) are good ideas for storing hazardous waste to help prevent leaks, spills, or explosions. Especially important points listed on the certification form are in **bold**.

GOOD IDEAS

Do:

- ✓ **Inspect the accumulation area weekly for signs of spills or container deterioration.**
★ See Appendix 3 for an example *Inspection Checklist* you can use at your shop.★
- ✓ Keep written records of the accumulation area inspections for 3 years.
- ✓ Use secondary containment at the hazardous waste storage area. Secondary containment means tools such as dikes, berms, retaining walls, curbing, or other systems that will hold hazardous wastes in case your primary hazardous waste containers leak.
- ✓ If the storage area contains ignitable or reactive wastes, protect them from any materials or conditions such as sparks or heat that could cause them to catch fire or explode.
- ✓ Ground flammable material drums.
- ✓ If your shop has a satellite accumulation area:
 - Keep all satellite accumulation containers near where the waste is being generated, under the control of the person generating the waste;
 - Keep the satellite accumulation container closed;

- o Keep the satellite accumulation container in good condition.
 - o Store less than 55 gallons of hazardous waste at each satellite accumulation area. Once you reach the 55-gallon limit, transfer the waste to your central storage place for hazardous waste containers.
- ✓ Submit information on the shop and its waste accumulation areas to local police, fire departments, and hospitals.
- ★ *See Appendix 4 for a Sample Letter to Local Authorities.* ★

Don't:

- × Ship containers before they are full.

2.2.4 Shipping your waste

You must dispose of your hazardous waste by sending it to a permitted or authorized hazardous waste hauler and keeping required records. This section will help you comply with regulations for shipment of your hazardous waste.

REQUIREMENTS FOR SHIPPING YOUR WASTE

You must send all of your hazardous wastes to a permitted or authorized hazardous waste hauler, and you must keep required records. This means you:

Do:

- ✓ Ship your hazardous waste to a permitted hazardous waste recycling, treatment, storage or disposal facility, or one that has been authorized by DNREC.
- ✓ Only use a hauler with a Delaware Hazardous Waste Transporter Permit to transport your hazardous waste.
- ✓ Keep records of how you disposed of your hazardous waste for at least 3 years. Adequate records include hazardous waste manifests or other documentation, such as bill of lading, receipts, tolling agreements, or letters of acceptance. The documentation should describe the waste and how much was disposed, where it was disposed, and when it was disposed.

Don't:

- ✗ Dispose of your hazardous waste in a solid waste landfill, municipal waste incinerator, or in a dumpster.
- ✗ Dispose of your hazardous waste at your shop, for example, by flushing it into the septic tank, down the storm drain, into a stream, or on the ground.
- ✗ Treat your hazardous waste at your shop, for example, by burning it or allowing it to evaporate into the air.
- ✗ Transport your own hazardous waste to another location.

In addition to the requirements above, the following Best Management Practices (BMPs) are good ideas for shipping hazardous wastes.

GOOD IDEAS

Do:

- ✓ If your hazardous waste is recycled, and if you and your licensed hazardous waste recycler have a reclamation agreement, keep a copy of the agreement in your records.
- ✓ Check with business colleagues or industry trade associations to help you choose an appropriate hauler or recycling, treatment, or disposal facility to handle your waste. You can also contact the DNREC Pollution Prevention and Compliance Assistance Program for suggestions, at 302-739-6400.

2.2.5 Planning for emergencies

Maintaining safety and emergency equipment and writing down a plan for what to do in case of emergency can reduce the impact if a spill or explosion does happen at your shop. This section will help you prepare for emergencies that do occur.

There are no emergency preparedness requirements for CESQGs. However, the following Best Management Practices (BMPs) are good ideas to help you plan and prepare for any emergencies at your shop.

Please consider implementing the following good ideas for emergency preparedness.

GOOD IDEAS

Do:

- ✓ Keep the following equipment to help your shop be prepared for an emergency:
 - o An internal communication system (such as an alarm or intercom) if your accumulation area is remote;
 - o A telephone to call for help;
 - o Fire extinguishers;
 - o Materials to control a hazardous waste spill (such as spill absorbents, overpack drums, and extra 55-gallon drums); and
 - o Decontamination supplies (such as neutralizing agents like lime).
- ✓ Post a list next to the telephone or radio with the phone number for the fire department and the person in your shop who is responsible for responding to emergencies. Also list the location of all fire extinguishers, spill control materials, and the fire alarm.
 - ★ *See Appendix 6 for a sample Emergency List you can use in your shop.* ★
- ✓ Make sure you have enough water at sufficient pressure to supply fire hoses, sprinklers, or spray systems; or have foam-producing equipment to control fires.
- ✓ Maintain your shop's emergency equipment, such as fire extinguishing equipment, and test it periodically to make sure everything is in working order.
- ✓ Keep enough aisle space in all work areas to allow people to get out in case of an emergency, and make sure there is enough room to move emergency equipment. Do not block emergency or safety equipment.
- ✓ Develop a written plan for how to prevent and respond to emergencies that includes:
 - o How you will maintain and operate your shop to minimize the possibility of fire, explosion or any other unplanned release of hazardous waste;
 - o The name and contact information for the emergency coordinator responsible for responding to accidents;

- o Fire, spill, and explosion response procedures;
 - o What emergency equipment is in place at your shop; and
 - o Evacuation plan, signals and routes.
 - ★ *See Appendices 7 and 8 for Sample Emergency Preparedness Tools and an Emergency Plan of the type you should create for your shop.* ★
- ✓ Contact your local police and fire departments, as well as state emergency response teams and local hospitals, to let them know what types of hazardous waste you handle at your shop before any accidents occur. This way, if an accident does occur, they will be prepared and will know how best to respond.
- ★ *See Appendix 4 for a Sample Letter to Local Authorities.* ★
- ✓ Teach your employees about the emergency plan during their hazardous waste training.

2.2.6 Training your employees

Training your employees on the proper handling of hazardous waste will help avoid spills or explosions. This section will help you think about training for your employees that handle hazardous waste.

Training for employees who handle hazardous waste is not required for CESQGs. However, using the following Best Management Practices (BMPs) to design hazardous waste training for your employees can help prevent release of hazardous wastes.

Please consider implementing the following good ideas for training your employees that handle hazardous waste. Especially important points listed on the certification form are in **bold**.

GOOD IDEAS

Do:

- ✓ **Train your shop's staff to identify hazardous waste.** After being trained, your employees should:
 - o Know which materials and wastes in your shop are hazardous;
 - o Be able to tell when a new product or waste might be hazardous;
 - o Know how to read and use Material Safety Data Sheets (MSDSs); and
 - o Understand warning labels on hazardous products.
- ✓ **Train your shop's staff to inspect and handle hazardous wastes.** After being trained, your employees should:
 - o Avoid spills (for example, by using funnels, drip pans, and absorbent materials);
 - o Use equipment to protect themselves (such as gloves and respirators);
 - o Keep hazardous wastes separate from one another and from other materials;
 - o Store materials and wastes correctly (such as labeling waste containers and marking the date when you first put waste into an empty container); and
 - o Avoid improper disposal of waste (by not dumping hazardous waste on the ground, in drains, or dumpsters; by not burning hazardous waste or letting it evaporate; and by not mixing hazardous waste with non-hazardous waste).
- ✓ **Train your shop's staff to follow Emergency Response Procedures.** After being trained, your employees should know how to:
 - o Respond to serious spills or other accidents;
 - o Respond to communications and alarm systems;
 - o Contact emergency responders (fire, police, and ambulance);
 - o Find emergency equipment;

- o Extinguish a small fire and when to try to do so;
 - o Contain and clean up a waste spill;
 - o Follow your shop's emergency plan; and
 - o Use evacuation plans and routes.
- ✓ Include training on pollution prevention. After being trained, your employees should know how to reduce the amount of hazardous waste they generate by carefully managing inventories, substituting less toxic materials where possible, and recovering and recycling waste.
 - ✓ Provide training to all new employees within six months of hiring them. You should also provide refresher training every year.
 - ✓ Keep a record of your hazardous waste training for three years. You should record:
 - o The dates and times of the training;
 - o What topics the training covered;
 - o Who attended the training and their job descriptions; and
 - o Who provided the training.

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2.3 SQGs: How to manage your hazardous waste

Review this section of the workbook if you generate hazardous waste and are a Small Quantity Generator (SQG).

- If you do not generate hazardous waste, skip to Section 2.4.
- If you do generate hazardous waste and are a CESQG, you should skip this section. Make sure you have read section 2.2 instead.
- If you are not sure if your shop is an SQG, review and complete Section 2.1.

This section contains information on the requirements and good ideas for managing hazardous waste at an SQG shop. Each topic provides you with information on what you must do to comply with the regulations as well as practices that are good ideas but not required for managing hazardous waste at SQG shops.

When you are finished reading this section, you should be able to answer the following questions on the Auto Body Self-Certification Form:

6. Are all hazardous waste containers properly labeled?
7. Are all containers holding hazardous waste managed to prevent or minimize release?
8. Is the accumulation area inspected weekly for signs of spills or container deterioration?
9. Does your shop send all hazardous wastes to a permitted hazardous waste treatment, storage, or disposal facility or a state authorized facility?
10. Does your shop have a program that trains employees who handle hazardous waste in proper waste management procedures?

2.3.1 Labeling containers

Containers holding hazardous waste must be appropriately labeled. This section will help you comply with hazardous waste container labeling regulations.

REQUIREMENTS FOR LABELING CONTAINERS

You must make sure all your hazardous waste containers are properly labeled. This means you:

Do:

- ✓ Always label all containers and tanks holding hazardous waste with the words "HAZARDOUS WASTE." Hazardous waste containers in satellite accumulation areas should also always be labeled either with the words "HAZARDOUS WASTE" or with other words that say what is in the container.
- ✓ Indicate on container labels that incompatible wastes have not been placed in the same container. The easiest way to do this is to list exactly what is stored in the container on the label.
- ✓ Date each container label. If the storage container is in your central hazardous waste storage area, record the date that you started storing hazardous waste in that container. If the container is a satellite accumulation container, record the date as soon as 55 gallons are added to that container and it is moved to the storage area.

2.3.2 Managing containers

Hazardous wastes must be stored in appropriate containers and handled carefully. This section will help you manage and handle your hazardous waste containers to prevent leaks, spills, and explosions.

REQUIREMENTS FOR MANAGING CONTAINERS TO PREVENT RELEASES

You must manage hazardous waste containers to prevent wastes from leaking, spilling, or exploding. This means you:

Do:

- ✓ Always keep container lids and bung holes closed, except when you are filling or emptying the container. Funnels with lids are OK, so long as the lids are kept closed when not in use. If you have hazardous waste tanks, always keep their lids closed as well.
- ✓ Keep your storage containers in good shape, with no leaks, corrosion, bulges, etc. If a container is not in good condition or is leaking, transfer the hazardous waste into a container that is in good condition.
- ✓ Open, handle and store containers carefully to prevent them from rupturing and to prevent the waste from leaking or spilling. Use caution when you move containers, and protect them from moving vehicles.
- ✓ Store wastes in containers that are compatible with the waste (so the wastes will not dissolve, corrode, or react with the container itself), or containers with compatible liners. Steel drums approved by the US Department of Transportation should be used for all paints, thinners, gun cleaners, and paint strippers. Acid wastes should be stored in plastic containers, not metal drums.
- ✓ Keep containers holding wastes that could react with each other separate. Containers should be separated by a barrier (like a dike, berm, or wall) or by spacing the containers far apart. Store all containers far enough apart so that you have room to inspect them thoroughly.
- ✓ Store rags and any other materials that may have touched solvents or paint strippers in closed, airtight containers. Leaving dirty, solvent-soaked rags lying around can cause a fire or explosion if fumes from the rags come in contact with a spark.

In addition to the requirements above, the following Best Management Practices (BMPs) are good ideas to help prevent hazardous wastes from leaking, spilling, or exploding.

GOOD IDEAS

Do:

- ✓ Store only one type of hazardous waste in each container. Mixing wastes can cause dangerous reactions and makes waste disposal more expensive and difficult. For example, you should never store acids (like battery acid) and bases (like alkaline rust remover) in the same container or cabinet.
- ✓ Store hazardous waste containers on a surface that prevents spills and leaks to the environment. The surface should not allow any material to leak through, and it should have no cracks or gaps. The surface should also prevent spills and leaks from running over the edge onto the ground. A small concrete pad and berm, or a commercially available containment pallet or tray, also works well.
- ✓ Store containers inside, or in an area protected from the weather, on a raised platform to prevent flooding.
- ✓ Keep containers with ignitable or flammable hazardous waste at least 50 feet inside your property line. Post large "No Smoking" signs near these containers.
- ✓ Make sure your hazardous waste containers are secure, so that trespassers cannot interfere with them. Keeping containers in a locked storage area is a good way to keep intruders out. You may also want to make sure your shop is well lit at night and/or install an alarm system.
- ✓ Properly dispose of containers that used to store hazardous wastes you previously generate but are not compatible with the hazardous wastes you are generating.
- ✓ Use a ground strap on metal drums to avoid sparks from static electricity.

Don't:

- ✗ Let your containers leak, rust, or get damaged.
- ✗ Let rainwater accumulate on the top of drums.
- ✗ Allow smoking near hazardous wastes.

2.3.3 Accumulating and storing hazardous waste

You may only store a limited amount of hazardous waste at your shop, for a limited amount of time. This section will help you understand requirements for hazardous waste accumulation and storage.

If you generate small amounts of hazardous waste throughout your shop, you may store these wastes close to where you generated the waste, in what are called "satellite accumulation areas." A satellite accumulation area simply means a place where you store waste as you work, before you move the waste to a central location in your shop.

REQUIREMENTS FOR ACCUMULATING AND STORING HAZARDOUS WASTE

You must inspect hazardous waste storage areas regularly, store hazardous wastes carefully, and keep within the limits for the amount of waste you can legally store. This means you:

Do:

- ✓ Inspect the accumulation area weekly for signs of spills or container deterioration.
- ✓ Keep written records of hazardous waste accumulation area inspections for 3 years.
 - ★ *See Appendix 3 for a sample Inspection Checklist you can use at your shop.* ★
- ✓ If the storage area contains ignitable or reactive wastes, protect them from any materials or conditions such as sparks or heat that could cause them to catch fire or explode.
- ✓ Submit information on the shop and its waste accumulation areas to local police, fire departments, and hospitals.
 - ★ *See Appendix 4 for a sample Letter to Local Authorities.* ★
- ✓ If your shop has a satellite accumulation area:
 - o Maintain all satellite accumulation containers under control of the operator and at or near the point of generation;
 - o Keep the satellite accumulation container closed;
 - o Keep the satellite accumulation container in good condition.

Don't:

- ✗ Accumulate more than 1,595 gallons (about 29 drums) or 13,000 pounds of hazardous waste at your shop at one time
- ✗ Accumulate more than 55 gallons of hazardous waste at each satellite accumulation area.
- ✗ Accumulate more than 1 kilogram (2.2 pounds) of acute hazardous waste at each satellite accumulation area.
- ✗ Store hazardous waste at your shop for more than 180 days. If you must ship waste more than 200 miles away for disposal, do not store the waste at your site for more than 270 days.

In addition to the above requirements, the following Best Management Practices (BMPs) are good ideas for storing hazardous waste to help prevent leaks, spills, or explosions.

GOOD IDEAS

Do:

- ✓ Use secondary containment at the hazardous waste storage area. Secondary containment means tools such as dikes, berms, retaining walls, curbing, or other systems that will hold hazardous wastes in case your primary hazardous waste containers leak.
- ✓ Ground flammable material drums.
- ✓ Store containers inside, in an area protected from the weather, on a raised platform to prevent flooding.

2.3.4 Shipping your waste

You must dispose of your hazardous waste by sending it to a permitted hazardous waste hauler and keeping required records. This section will help you comply with regulations for shipment of your hazardous waste.

REQUIREMENTS FOR SHIPPING YOUR WASTE

You must send all hazardous wastes to a permitted hazardous waste treatment, storage, or disposal facility, and keep all required records. This means you:

Do:

- ✓ Ship your hazardous waste to a permitted hazardous waste recycling, treatment, storage or disposal facility.
- ✓ Only use a hauler with a Delaware Hazardous Waste Transporter Permit to transport your hazardous waste.
- ✓ Prepare a hazardous waste manifest for all hazardous waste that is shipped off-site by a permitted hazardous waste transporter. Fill in all parts of the manifest. Keep returned copies of hazardous waste manifests with the signature of the person who accepted the waste at the recycling, treatment or disposal facility. This returned copy of the manifest shows that your hazardous waste was properly delivered. Keep your records organized.
- ✓ Keep the hazardous waste manifest for at least 3 years.
 - ★ See Appendix 5 for a sample Hazardous Waste Manifest. ★

Don't:

- ✗ Dispose of your hazardous waste in a solid waste landfill, municipal waste incinerator, or in a dumpster.
- ✗ Dispose of your hazardous waste at your shop, for example, by flushing it into the septic tank, down the storm drain, into a stream, or on the ground.
- ✗ Treat your hazardous waste at your shop, for example, by burning it or allowing it to evaporate into the air.
- ✗ Transport your own hazardous waste to another location.

In addition to the requirements above, the following Best Management Practices (BMPs) are good ideas for shipping hazardous wastes.

GOOD IDEAS

Do:

- ✓ Keep copies of any reclamation agreements you have with hazardous waste recyclers.
- ✓ Check with business colleagues or industry trade associations to help you choose an appropriate transporter or recycling, treatment, or disposal facility to handle your waste. You can also contact the DNREC Pollution Prevention and Compliance Assistance Program for suggestions, at 302-739-6400.

2.3.5 Planning for emergencies

Maintaining safety and emergency equipment and plans at your shop can greatly reduce the impact if a spill or explosion does happen at your shop. This section will help you prepare for emergencies that do occur your shop.

REQUIREMENTS FOR PLANNING FOR EMERGENCIES

You must plan and prepare for hazardous waste emergencies. This means you:

Do:

- ✓ Have a telephone to call for help.
- ✓ Have fire-extinguishing equipment.
- ✓ Test fire-extinguishing equipment.
- ✓ Maintain an internal communication system (such as an alarm system or intercom) if your accumulation area is remote.
- ✓ Make sure that aisle space allows unobstructed movement of personnel and emergency equipment.
- ✓ Post a list next to the telephone or radio with the phone number for the fire department, location of your emergency equipment, and the phone number of at least one person who is on standby and will coordinate emergency response.

★ *See Appendix 6 for a sample Emergency List you can use in your shop.* ★

In addition to the above requirements, the following Best Management Practices (BMPs) are good ideas to help you plan and prepare for any emergencies at your shop.

GOOD IDEAS

- Do:**
- ✓ Keep the following equipment to help your shop be prepared for an emergency:
 - An internal communication or alarm system to immediately alert all employees if an emergency occurs (for example, a fire alarm or an intercom system);
 - Materials to control a hazardous waste spill (such as spill absorbents, overpack drums, and extra 55-gallon drums); and
 - Decontamination supplies (such as neutralizing agents like lime).
 - ✓ Make sure you have enough water at sufficient pressure to supply fire hoses, sprinklers, or spray systems; or have foam-producing equipment to control fires.
 - ✓ Develop a written plan for how to prevent and respond to emergencies that includes:

- How you will maintain and operate your shop to minimize the possibility of fire, explosion or any other unplanned release of hazardous waste;
- The name and contact information for the emergency coordinator responsible for responding to accidents;
- Fire, spill, and explosion response procedures;
- What emergency equipment is in place at your shop; and
- Evacuation plan, signals and routes.

★ *See Appendices 7 and 8 for a sample Emergency Preparedness Tool and Emergency Plan of the type you should create for your shop.* ★

- ✓ Contact your local police and fire departments, as well as state emergency response teams and local hospitals, to let them know what types of hazardous waste you handle at your shop before any accidents occur. This way, if an accident does occur, they will be prepared and will know how best to respond.

★ *See Appendix 4 for a sample Letter to Local Authorities.* ★

- ✓ Teach your employees about the emergency plan during their hazardous waste training.

2.3.6 Training your employees

Training your employees on the proper handling of hazardous waste will help avoid spills or explosions. This section will help you think about training for your employees that handle hazardous waste.

REQUIREMENTS FOR TRAINING YOUR EMPLOYEES

You must provide training for your employees that handle hazardous waste. This means you:

Do:

- ✓ Train employees who handle hazardous waste in proper waste management procedures. This means that employees should understand:
 - What a hazardous waste is, and which wastes are hazardous at your shop. Employees should be able to tell when a new product or waste might be hazardous. They should also know how to read and use Material Safety Data Sheets (MSDSs) and understand warning labels on hazardous products.
 - How to properly store and accumulate wastes to prevent and minimize releases. After being trained, your employees should:
 - Avoid spills (for example, by using funnels, drip pans, and absorbent materials);
 - Use equipment to protect themselves (such as gloves and respirators);
 - Keep hazardous wastes separate from one another and from other materials;
 - Store materials and wastes correctly; and
 - Avoid improper disposal of waste.
 - How to properly label containers with the words "HAZARDOUS WASTE" and the date when materials were first put in the empty container,
 - How to follow Emergency Response Procedures, including how to
 - Respond to serious spills or other accidents;
 - Respond to communications and alarm systems;
 - Contact emergency responders (fire, police, and ambulance);
 - Find emergency equipment;
 - Extinguish a small fire and when to try to do so;
 - Contain and clean up a waste spill;
 - Follow your shop's emergency plan; and
 - Use evacuation plans and routes.
 - How to maintain required hazardous waste records.
- ✓ Keep records indicating that an employees training program is occurring.

In addition to the above requirements, the following Best Management Practices (BMPs) are good ideas for your employee-training program.

GOOD IDEAS

Do:

- ✓ Include training on pollution prevention. After being trained, your employees should know how to reduce the amount of hazardous waste they generate by carefully managing inventories, substituting less toxic materials where possible, and recovering and recycling waste.
- ✓ Provide training to all new employees within six months of hiring them. You should provide refresher training every year.
- ✓ Include in training records:
 - The dates and times of the training;
 - What topics the training covered;
 - Who attended the training and their job descriptions; and
 - Who provided the training.
- ✓ Keep these training records at your shop for three years.

2.4 Universal waste

Many auto body shops use dry cell or lead-acid batteries (such as regular AA batteries and car batteries), mercury thermostats, and/or mercury-containing fluorescent/high-intensity discharge (HID) lamps. Any shop that uses these items must choose to either manage them as "universal waste" or as hazardous waste when those items reach the end of their lives.¹ This section of the workbook explains what you must do to comply with these regulations if you choose to manage your waste as "universal waste." If you choose to manage your waste as hazardous waste, refer to Sections 2.1 - 2.3 of this workbook.

It is very important to manage universal wastes properly, because they can contain heavy metals and other hazardous materials that can contaminate the environment and the food chain for decades. Batteries, mercury thermostats, and mercury-containing lamps should *never* be sent to solid waste landfills. For example, mercury from these materials could poison water supplies, and could make any person or animal that eats the fish sick. At high levels, mercury can cause severe brain and kidney problems or even death. Children and fetuses are most at risk for mercury poisoning.

This section will help you:

- Understand how to dispose of universal waste in accordance with regulations;
- Improve your shop's universal waste handling practices and awareness.

When you are finished reading this section, you should be able to answer the following questions on the Auto Body Self-Certification Form:

11. What is your shop's universal waste handler status?
12. Have you made your employees aware that batteries, mercury thermostats, mercury-containing fluorescent/high-intensity discharge (HID) lamps and other universal wastes must be handled according to requirements for universal waste (or hazardous waste)?
13. Is your shop in compliance with all of the requirements for handling, transporting and disposing of batteries, mercury thermostats, fluorescent/high-intensity discharge (HID) lamps and other universal wastes?

¹ Universal Waste requirements also cover the handling and disposal of obsolete pesticides, which are not expected to be present at shops covered under the Auto Body Self-Certification Program. If your shop handles obsolete pesticides, you must contact DNREC to understand requirements before completing the Auto Body Self-Certification Form.

2.4.1 What is universal waste?

Universal waste is a special category of hazardous waste that is covered under a different set of regulations. The adoption of the Universal Waste Rule allows businesses to handle certain types of waste under less strict guidelines than hazardous waste regulations. These wastes include:

- **Batteries:** This includes both dry cell batteries, such as AA and D used for electronic devices, and lead-acid batteries, such as car batteries. This category includes common alkaline batteries as well as less common batteries like those made of lithium and nickel metal hydride. Used car batteries don't have to be managed as universal waste if they are sent to a recycler.
- **Mercury thermostats:** These thermostats may be marked as containing mercury. Alternately, you can usually identify a mercury thermostat by opening it up and seeing a glass tube with mercury inside the tube. Do not discard any thermostat unless you are positive it does not contain mercury.
- **Mercury-containing fluorescent and high-intensity discharge (HID) light bulbs:** Mercury-containing fluorescent lights usually have a silver end-cap. Lights with a brown or green end-cap are usually low-mercury and do not need to be managed as universal waste or hazardous waste. If the manufacturer has identified lights as low-mercury/non-regulated in another way, those lights do not need to be managed as universal waste or hazardous waste either.

If you use **lamp-crushing devices**, such as "drum-top" crushers, for fluorescent/HID lamps, you **must** handle the waste lamps as hazardous waste, not universal waste. You also must have a hazardous waste permit to operate the device, and you may be subject to air permitting requirements for managing fluorescent/HID bulbs. You should contact DNREC's Solid and Hazardous Waste Management Branch at 302-739-3689 to make sure you are in compliance. However, even if you are managing lamps as hazardous waste, you can still choose to manage batteries and mercury thermostats as universal waste.

You could manage all of your shop's universal waste as hazardous waste, but then your shop must meet hazardous waste requirements for all of these materials. Including these materials in your shop's hazardous waste stream could move your shop into a hazardous waste generator category with stricter requirements.

2.4.2 What is your universal waste handler status?

As with hazardous waste, universal waste requirements are different depending upon the amount of waste that a business handles. However, **universal waste handler categories are NOT the same as hazardous waste generator categories**. There are only two universal waste handler categories: Large Quantity Handler and Small Quantity Handler.

- **Large Quantity Handlers** accumulate 11,000 pounds or more of universal waste per year. This workbook does not provide the requirements for Large Quantity Handlers, because the

Auto Body Self-Certification Program is targeted at small shops. Please contact DNREC's Solid and Hazardous Waste Management Branch at 302-739-3689 if your shop accumulates 11,000 pounds or more of universal waste per year, so that DNREC can provide you with the requirements for Large Quantity Handlers. You should still be sure to fill out the universal waste questions on the self-certification form, however, because they apply to all universal waste handlers.

- o **Small Quantity Handlers** accumulate some amount of universal waste, but less than 11,000 pounds per year. If your shop is a small quantity handler, please continue reading to learn more about the universal waste requirements you face.

Your shop is not a handler of universal waste if your shop does not accumulate any waste batteries, mercury thermostats, mercury-containing fluorescent lamps, or obsolete pesticides. If your shop is not a handler of universal waste, please skip to Section 2.5 of the workbook. Note that all fluorescent lamps and tubes are considered to be universal waste unless you are sure that they are not regulated. For example, if the manufacturer identified your lamps as low-mercury/non-regulated by marking the box or by putting brown or green and-caps on the bulbs you do not have to manage those bulbs as universal waste. Those bulbs can be managed as solid waste.

2.4.3 How to properly handle universal waste

All small quantity handlers of universal waste must meet all of the following requirements.

REQUIREMENTS FOR SMALL QUANTITY HANDLERS OF UNIVERSAL WASTE

You must ensure that your shop handles universal waste in such a way that it cannot endanger the environment or the health of your employees and the community, and that your employees are aware of these special handling requirements. This means you:

Do:

- ✓ Keep universal waste in closed containers that prevent any parts of the waste from being released.
- ✓ Label all universal waste containers with the type of waste that's inside.
- ✓ Keep records of the dates on which universal waste is generated.
- ✓ Inform all employees that handle universal waste about proper handling and emergency procedures. (Several safety/spill procedures are listed under "Good Ideas" in this section.)
- ✓ Send all universal waste ONLY to another universal waste handler, a permitted facility, or a foreign destination.
- ✓ Maintain shipping manifests for universal wastes.

Don't:

- ✓ Keep universal waste for more than one year from the time it was generated.
- ✓ Use lamp-crushing devices if you want to manage the lamps as universal waste. If you choose to use a lamp-crushing device, you must have a hazardous waste permit and may need an air permit. Contact DNREC's Solid and Hazardous Waste Management Branch at 302-739-3689 for further information.

GOOD IDEAS

In addition to the above requirements, the following Best Management Practices (BMPs) are good ideas for properly handling universal waste.

Do:

- ✓ Send light bulbs for recycling, packaged according to your recycler's instructions. Appendix 1 includes a list of fluorescent light recyclers.
- ✓ Safely respond to mercury spills, such as a broken light bulb or thermostat:
 - Buy a mercury spill kit and train your employees how to use it to clean up spills.
 - Immediately after a spill, ventilate the area because mercury can quickly turn into a vapor that can damage the lungs. If a light bulb or mercury thermostat is broken, open the windows and close the doors to other rooms. If there are no windows, leave the door open and prop open all doors in the shop until there is a clear path to the outside.

- After a spill, if a spill kit is not available, wear a dust mask and plastic gloves and sweep up the glass and powder with a broom. The mercury in fluorescent light bulbs is not in the easily recognized silvery liquid form. Consider the entire light bulb as hazardous waste when broken.
- ✓ Store light bulbs in the containers they were shipped in, to prevent breakage.
- ✓ Keep universal waste containers where they are not likely to be knocked over or run into.
- ✓ Store batteries inside in a cool location in a vented, nonmetal container. A plastic bucket or sturdy cardboard box works well. Do not place an airtight lid on the container, because gases that normally vent from batteries may be trapped, creating a potentially dangerous situation.
- ✓ Prevent used batteries from short-circuiting by placing batteries in separate plastic bags or putting tape over the terminals.
- ✓ Inspect battery containers regularly to ensure they are not leaking or broken. Put batteries into new containers if you find that containers are leaking or broken.
- ✓ Carefully handle batteries that are dirty or have a white, film-like substance around the terminals. This may indicate that caustic materials have leaked out of the batteries. Wear protective gloves and wash your hands with soap and water after handling the batteries.
- ✓ Keep a spill kit next to the battery storage area, in case there is a spill. The spill kit should include baking soda or lime to neutralize the acid, as well as clean-up materials such as rags, diapers or kitty litter.
- ✓ React properly and promptly if a lead acid battery spills or leaks:
 - Stop the source of the leak or spill.
 - Place the broken, cracked or leaking battery in a closed, watertight, acid-resistant storage container. NEVER assume a broken battery is completely dry, even if you think there is no more acid inside.
 - Prevent spilled material from spreading.
 - Neutralize the acid with baking soda or lime.
 - Soak-up neutralized acid with a clean dry rag, diaper, or kitty litter.
 - Dispose of clean-up material in a labeled, acid-resistant, covered storage container.
 - Have used clean-up material collected by an authorized hazardous waste hauler.

Don't:

- ✗ Ever use a shop vacuum to clean up mercury or broken fluorescent light bulbs.
- ✗ Tape light bulbs together for shipping.
- ✗ Overstuff or underfill light bulb shipping boxes.

2.5 Fuel and used oil

Shops that handle fuel and oil must carefully follow requirements to ensure that these materials do not contaminate the water and the air. For instance, liquid fuel can escape storage tanks through cracks, and contaminate groundwater supplies for miles around. Fuel vapors can escape tanks at filling points or at pumps, and pollute the air. Used oil becomes contaminated with toxic chemicals during normal usage. If it is released into the water or burned, toxic contaminants can endanger the health of workers, the community and the environment. A single quart of motor oil can pollute 250,000 gallons of drinking water.

This section will help you:

- o Understand that storage tanks for fuel and oil must meet special DNREC requirements;
- o Understand the requirements for properly handling used oil and used oil filters; and
- o Learn voluntary practices to manage your used oil even better.

When you are finished reading this section, you should be able to answer the following questions on the Auto Body Self-Certification Form:

- | |
|---|
| <p>14. Does your shop have one or more storage tanks for fuel or oil, either above ground or underground?</p> <p>15. Does your shop generate any used oil?</p> <p>16. Is your shop in compliance with all of the requirements for handling used oil?</p> <p>17. Does your shop send its used oil for recycling?</p> |
|---|

2.5.1 Fuel/oil storage tanks

You need to read this section if your shop stores new or used fuel and/or new or used oil in any kind of tank -- whether that tank is above ground or underground. You are responsible for meeting requirements and ensuring that fuel/oil does not escape these tanks, and contaminate the environment.

If your shop does not have storage tanks for fuel or oil, continue on to Section 2.5.2.

REQUIREMENTS FOR FUEL/OIL STORAGE TANKS

You must ensure that all oil/fuel storage tanks meet requirements that protect the air and water. These requirements apply to tanks that are above ground and underground.

This means you:

Do:

- ✓ Contact the DNREC Tanks Branch at 302-395-2500 to find out and comply with storage tank requirements.
- ✓ Notify DNREC at 1-800-662-8802 if your shop has a release of fuel or oil to the environment. This includes any releases to asphalt or concrete surfaces that drain to storm sewers or surrounding soil.

2.5.2 What is used oil?

Used oil is a contaminated fluid (derived from crude or synthetic oil) that was originally intended as a lubricant, coolant or other similar use. Examples of used oil include brake fluid, compressor oils, coolants, electrical insulating oil, engine oil, heating media, hydraulic oil, lubricants, cutting oil, refrigeration oil, power steering fluid and transmission fluid (both petroleum and synthetic).

If your shop generates any quantity of used oil and used oil filters, you are responsible for properly handling and properly recycling, or disposing of that used oil. Keep reading to understand those requirements and other improved practices for handling used oil. If your shop does not generate any used oil, you can skip to Section 2.6.

2.5.3 How to handle used oil and used oil filters properly

DNREC has created the following straightforward regulations for you to follow if your shop generates used oil. These regulations help protect the environment and the safety of you and your employees.

REQUIREMENTS FOR HANDLING USED OIL AND USED OIL FILTERS

You must ensure that your shop meets all requirements for generators of used oil. This means you:

Do:

- ✓ **IMMEDIATELY** respond to any releases or spills of used oil:
 - Stop the release.
 - Contain the release.
 - Clean up the release.
 - Properly manage any materials (such as soil or kitty litter) contaminated with used oil. You can send these to shops that accept petroleum-contaminated materials. Call DNREC Pollution Prevention and Compliance Assistance (302-739-6400) if you have any questions.
- ✓ Label all used-oil containers and tanks with the words "Used Oil."
- ✓ Obtain a permit if you intend to burn your used oil in a used oil fire space heater. Contact DNREC to find out how to obtain a permit. Call *both* the Air Quality Management Branch (302-739-4791) and the Solid and Hazardous Waste Management Branch (302-739-3689).
- ✓ Fully drain all used oil filters before storing and disposing/recycling, and store the used oil in the used-oil container. It usually takes 24 hours to fully drain a filter.
- ✓ Keep all used oil filters (including transmission fluid filters) in a container with a closed lid
- ✓ Label all used oil filter containers with the words "Used Oil Filters Only."

Don't:

- ✓ Mix used oil with hazardous waste.
- ✓ Burn used oil in a used oil fire space heater without a permit.

GOOD IDEAS

In addition to the above requirements, the following Best Management Practices (BMPs) are good ideas for properly handling used oil. Especially important points listed on the certification form are in **bold**.

Do:

- ✓ **Send your used oil to a used oil recycler.** This conserves resources and keeps oil from contaminating the environment. You may be able to obtain information about oil recycling

from the National Oil Recyclers Association (NORA) at 703-753-4277 or www.noranews.org.

- ✓ Keep your used oil container covered tightly. This is a VERY important practice, and may be a subject of future DNREC regulations. Also keep containers protected from weather and set on a curbed, impermeable, concrete surface.
- ✓ Install secondary containment around storage areas. Secondary containment includes a small concrete pad and berm or a commercially available containment pallet or tray.
- ✓ Maintain spill-control material and equipment nearby stored fluids .
- ✓ Check all fluid storage containers for leaks and spills on at least a weekly basis.
- ✓ Send your used oil filters to a used oil filter recycler. The Delaware Solid Waste Authority (DSWA) provides a free oil filter recycling service. Call DSWA's Citizens' Response Line at 1-800-404-7080 to join. DSWA will provide your shop with a 55-gallon drum for used oil filters and arrange a pick-up schedule that's convenient for you, free of charge.
- ✓ Keep manifests or bills of lading for all of your used oil shipments.
- ✓ Train employees how to properly manage fluids.
- ✓ Use tight-fitting lids and leak-proof spigots, funnels or pumps to transfer fluids.
- ✓ Use different equipment (such as drain pans or funnels) to handle used oil than the equipment used for other waste streams. This helps avoid contamination.

2.6 Preventing pollution from hazardous waste, universal waste, and used oil

As discussed in Chapter 1, pollution prevention means reducing waste through efficient use of energy, raw materials, and water. Auto body shops that prevent pollution help the environment and can often cut costs and increase profits. Reducing waste can also help reduce regulatory requirements. For example, if you are a Small Quantity Generator of hazardous waste, reducing your waste could help you become a Conditionally Exempt Small Quantity Generator with fewer requirements for hazardous waste.

This chapter will help you identify ways to use your shop's resources more efficiently while preventing pollution from hazardous and universal waste and used oil. You can also contact DNREC's Pollution Prevention and Compliance Assistance Program to get free non-regulatory assistance in pollution prevention. Just call 302-739-6400.

When you are finished reading this section, you should be able to answer the following question on the Auto Body Self-Certification Form:

18. Does your shop implement any priority approaches to prevent pollution related to hazardous waste, universal waste or used oil?

Please consider implementing the following good ideas to prevent pollution from your auto body shop. Especially important points listed on the certification form are in **bold**.

GOOD IDEAS

Do:

- ✓ **Pre-clean parts with mechanical techniques (like a squeegee, a rag or a wire brush) to reduce the use of solvents.**
- ✓ **Use a solvent recycler to recycle thinners, gun cleaners, or other solvents.**
- ✓ **Keep spill-absorbent material available for cleaning spills.**
- ✓ **Store partially used absorbents in closed, labeled containers, right next to the containers for new absorbents.** Reuse partially used absorbents instead of throwing them away.
- ✓ **Keep liquids covered and in cool places to reduce evaporation.** For example, covering a parts washer can reduce evaporation and make your solvent last longer.
- ✓ **Buy low-mercury fluorescent/HID lamps.** Look for lights with a brown or green end cap, which are usually low mercury.
- ✓ **Reuse or recycle all waste electronics.** Note that many components of computer systems and monitors and other electronics are considered hazardous waste if disposed of, and **MUST NOT BE SENT TO LANDFILLS**. Contact the DNREC Solid and Hazardous Waste Management Branch at 302-739-3689 to find out about organizations that may accept your used (but functioning) electronics for reuse (and a potential tax deduction for your business). If items cannot be reused, the Delaware Solid Waste Authority (DSWA) operates a free electronics recycling center where you can drop off almost all of your used electronics. Call the DWSA Citizens' Response Line at 1-800-404-7080 to schedule a drop off time and date.
- ✓ **Take steps to avoid drips and spills of used oil.** Always use drain pans and take other steps identified in the "Good Ideas" Section of Section 2.5.3.
- ✓ Keep a well-organized shop to avoid accidents and spills.
- ✓ Recycle your used/HID light bulbs.
- ✓ Replace automotive switches that contain mercury -- for example, switches used in trunk lighting and in anti-lock braking systems. Ball bearing switches maybe an alternative.
- ✓ Recycle mercury thermostats and replace with non-mercury thermostats.
- ✓ Avoid the use of batteries whenever possible by purchasing tools and equipment that does not require batteries.
- ✓ Avoid buying products with non-removable batteries.
- ✓ Use rechargeable batteries whenever possible.
- ✓ Recycle batteries as much as possible.

Don't:

- ✗ **Buy high-mercury fluorescent/HID lamps.**

Chapter 3: Solid Waste

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3.1 Introduction to solid waste

For the most part, "solid waste" is what most people think of as trash, rubbish or garbage -- as long as it is not otherwise regulated by DNREC. Auto body shops generate many types of solid waste, such as used shop towels, empty containers and drums, sand blast grit, sanding dust, and even leftover lunches. Despite its name, even some of the liquids and gases can be considered solid waste, so long as they are not hazardous, but most auto body shops won't have this kind of waste.

Solid waste matters because even though it is not considered "hazardous" in regulatory terminology, it can damage the environment if not properly disposed of. Also, poorly managed solid waste can make a business and a community look and smell badly. DNREC's solid waste regulations protect communities from these problems. This chapter of the workbook explains what you must do to comply with regulations. This chapter also gives tips for reducing, reusing and recycling solid waste, which can save you money.

This chapter will help you:

- o Understand how to dispose of solid waste in accordance with regulations; and
- o Improve your shop's practices to reduce solid waste and prevent pollution.

When you are finished reading this section, you should be able to answer the following questions on the Auto Body Self-Certification Form:

1. Does your shop dispose of all hazardous waste separately from non-hazardous solid waste?
2. Does your shop have a "first-in, first-out" policy to prevent materials from becoming outdated?

3.2 How to properly dispose of solid waste

DNREC has created the following requirements to ensure that solid waste is properly disposed of so it does not contaminate the environment or create a nuisance in the surrounding community.

REQUIREMENTS FOR DISPOSING OF SOLID WASTE

You must ensure that your shop disposes of solid waste properly. This means you:

Do:

- ✓ Dispose of hazardous waste separately from solid waste.
- ✓ Use municipally provided solid waste pickup/disposal services, if available.
- ✓ Hire a licensed/permitted contractor to pick up and dispose of solid waste, if municipally provided solid waste pickup/disposal is not available.
- ✓ Contact the Delaware State Fire Marshal's Office (302-739-5665) if you store 100 or more used tires at any one time. If you store that many tires, you are subject to tire handling and storage regulations.

Don't:

- ✓ Mix solid waste with hazardous waste.
- ✓ Burn your solid waste. Contact DNREC if you have questions (302-739-6400).
- ✓ Dispose of your solid waste on your property. The only exception to this rule is the use of concrete, bricks and glass as clean fill.
- ✓ Dispose of liquid waste on the ground or into lakes or streams.
- ✓ Mix solid waste with used oil.
- ✓ Store solid waste near wetlands and drinking wells.
- ✓ Throw away mercury-containing fluorescent/high-intensity discharge lamps, mercury thermostats, and dry cell or lead-acid batteries. These must be managed as universal waste or as hazardous waste.
- ✓ Throw away electronics such as computer systems and monitors. Many electronics contain components that must be managed as hazardous waste.

GOOD IDEAS

In addition to the above requirements, the following Best Management Practices (BMPs) are good ideas for properly managing solid waste.

Do:

- ✓ Label ALL waste containers to prevent mixing of non-hazardous solid waste with other kinds of waste. If your shop mixes waste streams, you must manage all the waste under the most stringent requirements. For example, if solid waste mixes with hazardous waste, all of the waste must be treated as hazardous waste.
- ✓ Keep waste streams separated to increase their potential for reuse, recycling or treatment. For example, having a separate canister for waste paper can enable the recycling of waste paper.
- ✓ Completely use up the contents of aerosol spray cans before opening new cans.
- ✓ Make sure that liquid petroleum wastes are not dripping from towels placed into the trash."

- ✓ Keep waste shop towels in a closed, fireproof container labeled "Used Shop Towels."
- ✓ Store scrap metal for recycling (but don't store for longer than one year!)
- ✓ Store your used tires properly
 - Keep them in one location, not scattered.
 - Maintain a fire lane around the pile of tires.
 - Keep them off of grassy areas.
 - Keep them covered so they do not collect water and breed mosquitoes.
 - Keep the tires on rims, if possible, to reduce water collection.
 - Use citrus oil or baking soda to kill mosquito larvae in water, if water does collect in some tires.
- ✓ Send your tires for recycling/retreading.

Don't:

- ✗ Store parts or scrap material for longer than one year. Send as much scrap as possible to recyclers. A list of recyclers of windshields and plastic parts is available from DNREC. Call Pollution Prevention and Compliance Assistance (302-739-6400).
- ✗ Throw dirty wipes, paper towels or rags into the dumpster if they have come into contact with hazardous solvents or hazardous waste.
- ✗ Spray aerosol products into the air to empty spray cans.

3.3 Reducing waste and preventing pollution

Auto body shops can follow a number of good ideas to go beyond compliance in managing solid waste and preventing pollution.

GOOD IDEAS

The following Best Management Practices (BMPs) are good ideas for reducing waste and preventing pollution. Many of these tips may also save you money, and improve your shop's efficiency and effectiveness. Especially important points covered on the self-certification form are listed in **bold**.

Do:

- ✓ **Create a "first-in, first-out" policy for product storage areas**, to prevent materials from becoming unnecessarily outdated. To do this, date all materials when they are received and when they are opened, and don't open or use a newer product before finishing an older product.
- ✓ Inspect materials upon delivery and **IMMEDIATELY** return unacceptable materials to the supplier. This can help avoid unnecessary cost and waste.
- ✓ Put someone in charge of distributing and tracking all supplies and raw materials.
- ✓ Reduce solid waste by laundering shop towels through an industrial laundry service that discharges its wastewater into a public sewer system.
- ✓ Keep accurate records of your material usage to know how much you are reducing.

- ✓ Keep your storage and work areas clean and well organized.
- ✓ Manage, maintain and monitor your shop for top efficiency:
 - Locate and repair all leaks to prevent losses.
 - Practice preventive maintenance to avoid future losses from leaks.
 - Keep all containers covered to prevent evaporation and spills.
 - Install flow meters, flow control devices, and/or shutoff nozzles to cut down on water usage.
- ✓ Recycle cardboard, paper, glass, plastic and metal at a DSWA Recycling Center near you.

Don't:

- ✗ Purchase more of a product than you think you will need.
- ✗ Use chlorinated solvents, because then your rags must be managed as hazardous waste. Use cleaning compounds that are not chlorinated and have low volatile organic compound (VOC) emissions.

Chapter 4: Air Pollution

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4.1 Introduction to air pollution

When you think of air pollution, the first thing that generally comes to mind is smoke billowing from factory smokestacks. However, air pollution can be generated in many ways, even without billowing smoke.

Air pollution from auto body shop operations mainly comes from three activities: surface preparation, surface coating, and cleanup. These activities generate four major types of air pollutants that might impact human health and the environment, if they are not controlled properly:

1. Volatile organic compounds (VOCs);
2. Hazardous air pollutants (HAPs);
3. Dust from sanding and painting; and
4. CFCs from motor vehicle air conditioning refrigerants.

Volatile Organic Compounds and Hazardous Air Pollutants

Most paints, surface preparation solutions, and solvents used for mixing paint and cleaning equipment contain VOCs and HAPs. When VOCs evaporate into the air and combine with sunlight, they produce ground-level ozone (otherwise known as "smog"), which can worsen asthma, damage lung tissue, and contribute to serious respiratory illness. Ozone can also damage agricultural crops. HAPs can be harmful to people's health. For example, methylene chloride is found in common paint stripper products and has been shown to cause cancer and worsen heart problems.

Dust from Sanding and Painting

Dust comes from sanding activities (sanding dust) and over-spray from spray painting (painting dust). Sanding dust contains toxic metals, such as lead, arsenic, cadmium and chromium, and is dangerous to workers and people in your community. Excessive exposure to toxic metals can cause adverse health effects by causing a build up in the lungs, causing coughing and wheezing and by aggravating diseases like asthma and bronchitis. Paint dust, which can carry harmful chemicals present in paint products, can cause respiratory disease. Exposure can come from breathing the dust, getting the dust in food, or bringing the dust home on clothes so others might be exposed.

CFCs from Motor Vehicle Air Conditioning Refrigerants

Vehicle air conditioners use air conditioning refrigerants, such as R-12, R-134a, and Freon®, which are made from a group of chemicals called CFCs (chlorofluorocarbons). If CFCs evaporate or vent from your shop, they rise into the upper atmosphere and destroy the ozone layer, which protects the earth from ultraviolet (UV) radiation. Increased exposure to UV radiation increases the risk of skin cancer and can damage DNA in humans, plants and animals.

To minimize the environmental and health impacts of your business to your workers and community, your shop should take steps to keep the above major air pollutants (VOCs, HAPs, sanding dust and CFCs) under control. This chapter will help you:

- Apply for an air permit;
- Control dust from sanding and painting activities;
- Reduce fumes from paints and solvents;
- Identify efficient painting techniques;
- Properly clean spray guns and equipment;
- Repair and replace vehicle air conditioning system; and
- Meet requirements on record keeping and employee training on preventing air pollution.

When you are finished reading this section, you should be able to answer the following questions on the Auto Body Self-Certification Form:

1. Based on the way your shop operates, would it be possible for your shop to do more than 85 auto body jobs per week? The answer to this question will tell you if your shop is a major or minor source for air emissions.
2. Does any airborne sanding or painting dust (i.e., fugitive dust) leave your property and create a condition of air pollution?
3. Does your shop use a ventilated sander?
4. Does your shop store absorbent paint applicators (e.g., shop rags/towels) in closed containers?
5. Does your shop only use coatings designed for automotive painting purposes?
6. Do you always follow manufacturers' instructions for mixing coatings, to avoid over-diluting paints with solvents?
7. Does your shop use methylene chloride-based paint strippers?
8. Do your painters and technicians use only painting techniques allowed by Delaware regulations?
9. Is all painting carried out in a spray booth to contain paint emissions and over-spray?
10. Does your shop clean the spray guns using only the methods allowed by Delaware regulations?
11. Does your shop use detergents, high-pressure water, or other non-VOC cleaning options to clean coating lines and containers when practical?
12. Have all your employees that handle refrigerants (like CFCs) from air conditioners been trained and certified by an EPA-accredited program?
13. Does your shop employ a training program in the proper use and handling of coatings, solvents, and waste products to minimize air emissions?

4.2 Determining whether your shop is a major or minor source of air emissions

All auto body shops are required to get an air permit. The type of permit you need and the permit requirements you must meet are based on the amount of VOCs and HAPs your shop generates — in other words, whether your shop is a “major” or “minor” source of air emissions. There is a simple way for auto body shops to tell if they are a major or minor source:

- Based on the way that your shop operates, **if you *could not* do more than 85 auto body jobs per week**, your shop is a **minor source**. For example, you do not have enough space or equipment to do more than 85 jobs per week, your shop is a minor source. If your shop is a minor source, you will need to apply for an Auto Body Air Permit, as described in Section 4.3 of this workbook.
- **If you *could* do more than 85 jobs per week** (even if you don't actually do this many jobs) your shop may be a **major source**. To learn more, read Appendix 9 to determine whether your shop is major source. If you are still unsure if you are a major source, call the DNREC Air Quality Management Branch at 302-739-4791. If your shop is a major source, you should contact the DNREC Air Quality Management Branch immediately at 302-323-4542 in New Castle County and 302-739-4791 in Kent and Sussex Counties.

4.3 Applying for an Auto Body Air Permit in Delaware

All auto body shops that participate in the Auto Body Self-Certification Program should submit a permit application by February 15, 2005. This section of the workbook describes how to apply for the permit, advertising requirements associated with the application, and DNREC's enforcement approach for shops operating without a permit.

How to Apply

A permit application can be submitted by completing both form AQM-11, which is included in Appendix 10, and an Applicant Background Information Questionnaire, which is included in Appendix 11 of this workbook. The AQM-11 and the Applicant Background Information Questionnaire should be submitted to the following address along with the 2004 Auto Body Self-Certification Form and a \$125 application fee (payable to “State of Delaware - DNREC”):

DNREC Division of Air and Waste Management
Air Quality Management
Attention: Joanna Austin - Auto Body Project
156 South State Street
Dover, DE 19901

Permit Advertising

All auto body shops that submit complete applications by February 15, 2005 will be advertised together. The Department will waive the \$165 advertising fee for these facilities. If a public hearing is requested for any of these auto body shops, one public hearing will be held for the entire group. This will ensure that everyone who makes application by February 15 has a comparable permit. This will level the playing field for all auto body shops in this group. Any shop that makes application after February 15, 2005 will be subject to the \$165 advertising fee and may be required to go to public hearing individually. An individual public hearing raises the risk of more restrictive permitting requirements than for the group that was advertised together.

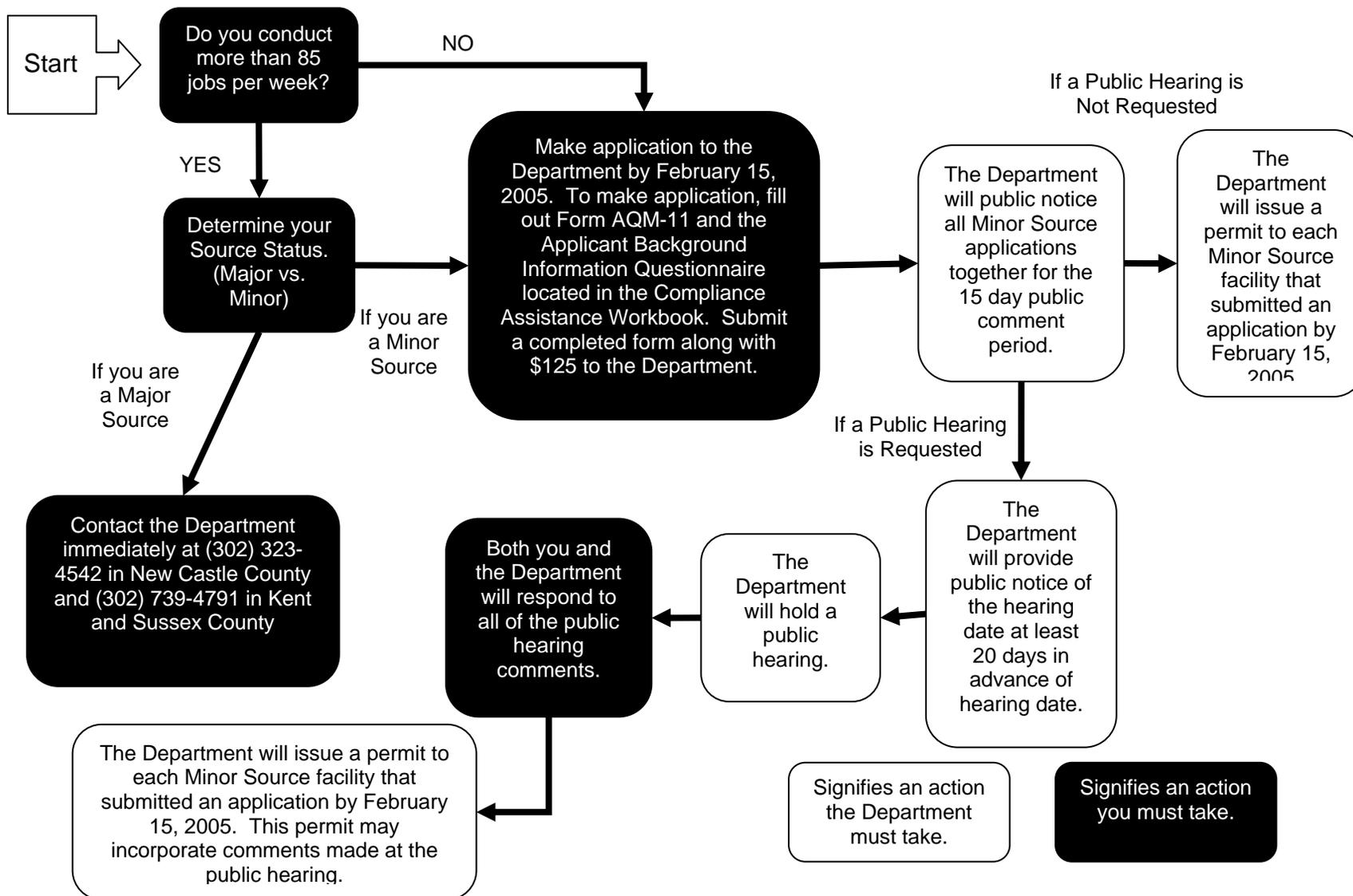
DNREC Enforcement Approach

All auto body shops that make application by February 15, 2005 will not be subject to enforcement action related to operation without a permit. Any shop that makes application after February 15 may be subject to enforcement action.

The figure on the next page illustrates the process of getting an Auto Body Air Permit in Delaware.

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PROCESS TO OBTAIN AN AUTO BODY SHOP AIR PERMIT



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4.4 Controlling dust and odor from sanding and painting

If your shop uses sanders to remove paint and body filler from cars, chances are good that dust generated from the sander could travel beyond the property of your shop. Spray painting might also create paint dust and odors that could harm your neighbors. It is your responsibility to ensure that airborne sanding or painting dust (fugitive dust) does not cause harm to your workers and neighbors.

This section contains information on what you must do to comply with the regulations as well as practices that are good ideas but not required for minimizing the amount of fugitive dust escaping into the air.

REQUIREMENTS FOR CONTROLLING DUST FROM SANDING AND PAINTING OPERATIONS

You must prevent sanding dust from traveling beyond the property of your shop. If you use dust-control devices on your sanding equipment, obtain a permit to install and operate the control device. You must include related information on your air permit application. This means you:

Do:

- ✓ Make sure dust from your auto body operations does not leave your property.
- ✓ Obtain a permit for your dust collection equipment. See Section 4.3 for more information on how to apply for a permit.
- ✓ Include information about your sanding devices on your air permit application. See Section 4.3 for information about the air permit application.

Don't:

- ✗ Create an odor or nuisance that is present outside the shop's property boundary.
- ✗ Allow any fugitive dust to leave the business premises and create a condition of air pollution.

In addition to the requirements above, the following best management practices (BMPs) are good ideas to help reduce and control fugitive dust from sanding and painting activities. Especially important points listed on the certification form are in **bold**.

GOOD IDEAS

Do:

- ✓ Use a dust collection system for controlling fugitive dust

- **Use a ventilated sander (dustless vacuum) system.** Vacuum units are the best dust-controlling devices — they can control up to 90% of dust generated from sanding operations.
- Use wet sanders to keep sanding dust from floating into the air. Wet sanding offers dual benefits of controlling sanding dust and allowing the sanding paper to last longer. However, the technique can generate wastewater with sanding dust, and could be a source of water pollution if the wastewater is not managed properly.
- ✓ Use room ventilation and filtration equipment in addition to dust collection systems to keep dust from escaping the shop.
- ✓ Keep sanding operations separate from the rest of your shop. Close shop doors and windows (if your shop has proper ventilation systems), to keep dust from blowing off your property.
- ✓ Ensure that your workers wear overalls, gloves, goggles, and respirators to reduce the amount of dust exposure.
- ✓ Repair minor dents or dings by the paint-less dent removal (PDR) technique. PDR is a purely mechanical process that uses special tools to restore sheet metal back to its original form by removing small dents, creases, and surface imperfections without the need for repainting.
- ✓ Inspect sanding equipment often. Make sure all collection systems, such as vacuum sanding units, are operating properly with no leaks in the system.

4.5 Reducing fumes from paints and solvents

Common surface preparation for auto body work involves the use of solvents for wiping the auto body surface and for removing old paint prior to applying coatings. The solvents often contain HAPs and VOCs. Paint and thinners also contain HAPs and VOCs that evaporate into the air. Because solvents, paint strippers, paints, and thinners can cause dangerous air pollution, state and federal regulations require that you take steps to minimize risks to your workers and the community.

The following are regulations for minimizing fumes from use of paints and solvents:

REQUIREMENTS FOR REDUCING FUMES FROM PAINTS AND SOLVENTS

You must implement proper measures to minimize fumes generated from use of paints and solvents. This means you:

Do:

- ✓ Only purchase coatings that comply with state and federal VOC limits.
- ✓ Store fresh and used coatings, solvents, and cleaning solvents in non-absorbent, non-leaking containers.
- ✓ Keep containers for fresh and used coatings, solvents, and cleaning solvents closed at all times except when filling in or emptying.
- ✓ Store absorbent paint applicators such as shop rags and towels in closed containers.
- ✓ Mix paints **ONLY** according to manufacturers' instructions, to avoid over-diluting the paint with solvent (that is, putting too much solvent into the paint).
- ✓ If you use cold solvent cleaners, only purchase solvents with a vapor pressure of 1 mmHg at 68°F. You should check with your solvent supplier to find out the vapor pressure of the solvents you buy. You can also find vapor pressure information on the products' Material Safety Data Sheets (MSDS), but be sure that the vapor pressure given is for 68°F.

In addition to the requirements above, the following best management practices (BMPs) are good ideas to help reduce fumes from paints and solvents. Especially important points listed on the certification form are in **bold**.

GOOD IDEAS

Do:

- ✓ Use low-VOC coatings
- ✓ Use coatings that contain no heavy metals, or have the lowest metal contents available.
- ✓ Use water-based primers and keep informed about developments in water-based top coats.
- ✓ Carry out all painting in a spray booth (or paint booth) to contain paint emissions and over-spray.
- ✓ Do all solvent cleaning, paint stripping, and paint mixing in a ventilated spray booth or prep station. This will minimize release of dangerous fumes.
- ✓ Ensure that ventilation of spray booths and prep stations is exhausted vertically at least six feet above the shop's roofline .
- ✓ Use detergent-based cleaners to prepare surfaces, instead of solvents.
- ✓ Make sure that workers wear gloves and use a respirator to avoid contact with solvents.

Don't:

- * **Use methylene chloride-based paint strippers.** Methylene chloride is considered a toxic air contaminant, and paint-stripper waste containing this chemical must be handled as hazardous waste.

4.6 Efficient painting techniques

Efficient painting techniques not only can help you reduce air emissions from your shop, they can also save you money on buying new paints and on disposing paint waste, and improve worker's health and safety. This section contains information on what painting techniques you can use to reduce air emissions from painting and coating.

REQUIREMENTS FOR PAINTING

You must use painting techniques that are approved by DNREC to minimize the amount of painting products evaporating into the air. This means you:

Do:

- ✓ Use only the following coating application techniques:
 - Any non-atomized application technique (e.g., flow/curtain coating, dip coating, roller coating, brush coating, cotton-tipped swab application coating, electrodeposition coating, etc.)
 - High Volume Low Pressure (HVLP) spraying
 - Electrostatic spray
 - Airless spray
 - Airbrush application methods for graphics, stenciling, lettering, and other identification markings
 - An application technique to cover finish imperfections equal to or less than 1 inch in diameter

Don't:

- * Use other (i.e., conventional) air-assisted painting techniques that atomize paint (i.e., techniques not listed above).

In addition to the requirements above, the following best management practices (BMPs) are good ideas for more effectively applying paints.

GOOD IDEAS

Do:

- ✓ **Paint everything in a spray booth, to contain paint emissions and over-spray.**
- ✓ Use new, laser-based spray paint technology to increase the efficiency of applying the paint accurately by more than 25%. The technology consists of a battery-powered targeting

device that emits two adjustable laser beams to help the spray gun operator target the correct spray pattern while maintaining the correct distance and angle from the part being painted. The targeting device can be attached to almost any liquid coating spray gun. Contact DNREC (302-739-6400) for more information if you are interested in this technology.

- ✓ Provide training to operators of the HVLP equipment on the proper use and settings of the equipment to minimize over-spray.
- ✓ Follow the manufacturer's instruction for using any spray painting system to avoid paint waste.
- ✓ Frequently inspect the spray booth filters to ensure that the system does not become clogged and ineffective.
- ✓ Follow the directions on product labels when mixing paints and solvents to minimize the amount of waste generated.
- ✓ Mix only the amount required for the particular painting/coating job to reduce unused paint that will become hazardous waste.

4.7 Cleaning spray guns and equipment

Be sure to properly clean all spray guns and your spray booth after each coating application. This ensures proper operation and removes leftover coating products from the coating cup, lines, and nozzle. Since most products for cleaning spray guns and spray booths contain hydrocarbon-based solvents that emit VOCs and HAPs, the cleaning waste must be managed following special procedures.

This section contains information on what you must do to comply with the regulations as well as practices that are good ideas but not required for cleaning spray guns and equipment.

REQUIREMENTS FOR CLEANING SPRAY GUNS AND EQUIPMENT

You must clean spray guns properly using the approved methods specified under the Delaware regulation. This means you:

Do:

- ✓ Use only the following methods to clean spray guns:
 - An enclosed spray gun cleaning system that is kept closed when not in use. Enclosed spray gun cleaning machines use less solvent than traditional methods and reduce spent solvent disposal costs.
 - An unatomized discharge of solvent into a paint waste container that is kept closed when not in use.
 - Disassembly of the spray gun and cleaning in a vat that is kept closed when not in use.
 - Atomized spray into a paint waste container that is fitted with a device designed to capture atomized solvent emissions.

In addition to the requirements above, the following best management practices (BMPs) are good ideas for cleaning spray guns and equipment. Especially important points listed on the certification form are in **bold**.

GOOD IDEAS

Do:

- ✓ **Use detergents, high-pressure water, or other non-VOC cleaning options to clean coating lines and containers when practical.**
- ✓ Use a spray gun cleaning system that re-circulates the cleaning solvent and collects the solvent for proper disposal. Only replace and dispose of the recycled cleaning solvent when the solvent cannot clean guns satisfactorily. You can determine when you need to replace the solvent by examining if there are stains on the spray guns after cleaning or if the recycled solvent is not clear.
- ✓ Reuse excess coating.
- ✓ Use disposable masking paper over the interior of paint booth surface in place of solvent-based cleaners for removing paint over-spray and residue .
- ✓ If use of disposable masking paper is not practical, clean the interior of paint booth surface by scraping along with water-based or low-VOC cleaners.
- ✓ Use a shop rag recycler.

Don't:

- * Use paper towels for cleaning up paints, solvents or thinners, because the paper towels would then be considered hazardous waste.
- * Use solvents to clean hands. Solvents can penetrate through worker's skin, enter the blood stream, and ultimately cause health problems.

4.8 Repairing and replacing vehicle air conditioning system

Because of the ozone-depleting nature of air conditioner refrigerants, federal law requires shops that repair air conditioning systems to capture and recycle all refrigerants. This section contains information on what you must do to comply with the regulations as well as practices that are good ideas but not required for repairing and replacing a vehicle air conditioning system.

REQUIREMENTS FOR REPLACING AND REPAIRING VEHICLE AIR CONDITIONING SYSTEM

You must properly recover and recycle refrigerants to prevent the release of CFCs and similar compounds into the atmosphere when you service or repair vehicle air conditioning system. This means you:

Do:

- ✓ Make sure your employees who handle refrigerants have been trained and certified by an EPA-accredited program. A list of approved certification organizations can be obtained by calling EPA Stratospheric Ozone Hotline at 1-800-296-1996.
- ✓ Allow only EPA-certified technicians to remove refrigerants.
- ✓ Use only your EPA-certified technician to purchase refrigerants, unless your shop is an EPA authorized reclaiming facility.
- ✓ Recycle refrigerant for reuse on-site or send recovered refrigerant to an EPA-approved reclaimer.
- ✓ Use only EPA-approved recycling/recovery equipment, and label the equipment properly. A list of the EPA-approved equipment can be obtained by calling the Ozone Hotline.
- ✓ Properly label and store refrigerants:
 - Always store your refrigerants in tanks that meet U.S. Department of Transportation (DOT) OR Underwriters Laboratories (UL) standards.
 - Label the tanks "Refrigerants."
- ✓ Keep a copy of your certification to operate recovery or recycling devices that meet EPA standards.
- ✓ Maintain records of off-site reclamation, including volume and final destination.
- ✓ Keep all records of refrigerant purchase, sales, on-site recycling, and reclamation for three years.

Don't:

- ✗ Evaporate or vent refrigerants to the atmosphere.

In addition to the requirements above, the following best management practices (BMPs) are good ideas for minimizing the release of CFC to the atmosphere.

GOOD IDEAS

Do:

- ✓ Maintain copies of technician and equipment certifications in the shop records.
- ✓ Encourage customers to have air conditioner leaks repaired to prevent CFCs from leaking into the environment.

4.9 Record-keeping and training

Since many coatings, surface-preparation products, and other solvents used in your shop are toxic chemicals, the Delaware regulation requires you to provide proper training to your employees on how to properly handle these products. Additionally, you are encouraged to maintain good purchase and usage records of these products. These records can help you determine your shop's air emission status, so that you can determine what air pollution requirements your shop needs to meet. This section contains information on what you must do to comply with the regulations as well as practices that are good ideas but not required for record keeping and training.

REQUIREMENTS FOR STAFF TRAINING

You must ensure staff receives training on what they can do to reduce air emissions. This means you:

Do:

- ✓ Employ a training program in the proper use and handling of coatings, solvents, and waste products to minimize air emission as described in this chapter.
 - ✓ Maintain the following records at the shop for a period of at least 5 years:
 - The name, identification number and manufacturer of each coating, reducer, catalyst, surface preparation product, and cleanup solvent used at the shop.
 - The volume of each coating, reducer, surface preparation product, and cleanup solvent used at the shop each month.
 - Certified Product Data Sheets showing the VOC content, in pounds of VOC per gallon of material of each coating and surface preparation product used at the shop.
- These records can be used to demonstrate to DNREC and EPA officials that your shop is using compliant coatings in amounts that comply with permitting thresholds.

Chapter 5: Industrial Wastewater

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5.1 Introduction to wastewater issues

Wastewater is generated any time water gets flushed down a drain, washed into the street or onto the ground, or discharged into a septic system. There are two kinds of wastewater to know about:

- **Industrial wastewater** means all wastewater contaminated with materials from auto body shop operations. If dangerous materials like paint, solvents, sanding dust, antifreeze, oil, or auto fluids get into your shop's wastewater, it is industrial wastewater. In this workbook, industrial wastewater also includes water from wet sanding, water from washing auto body tools and equipment, work area washing, or car washing. This chapter explains the requirements you must follow under Delaware law if you generate industrial wastewater. This chapter also gives tips for conserving water and preventing pollution, while saving you money.
- **Domestic (or sanitary) wastewater** is generated from using bathrooms, washing hands, showering, and preparing food. Domestic wastewater is not the focus of this workbook. Do not flush any industrial wastewater down bathroom or kitchen sinks, toilets, showers, or other places designed for domestic wastewater.

Industrial wastewater can pollute both surface water (like lakes and streams) and groundwater. In Kent and Sussex Counties, **ALL** public drinking water supplies come from groundwater, so if your shop does not follow requirements for wastewater, there is a good chance you could contaminate your local drinking water. Even wastewater that is sent to a septic system or down the sewer to a municipal or county treatment plant can cause problems if it contains certain materials that upset the treatment processes. Reading this chapter will help you keep your shop from damaging your local water supplies.

This chapter will help you:

- Understand if you generate industrial wastewater;
- Understand where your wastewater goes;
- Make sure you meet requirements for floor drains;
- Properly dispose of industrial wastewater and meet requirements for discharging to sewers and septic tanks (where allowed); and
- Conserve water and prevent water pollution.

When you are finished reading this section, you should be able to answer the following questions on the Auto Body Self-Certification Form:

1. Does your shop generate any industrial wastewater?
2. Does your shop discharge any industrial wastewater to dry wells, cesspools, galleys or other surface leaching systems?
3. Does your shop have any floor drains?
4. Have you called the DNREC Ground Water Discharges Section to schedule an inspection of your floor drain(s)?

5. Are any floor drains located near vehicles or in areas where automotive fluids are stored or used?
6. Are your floor drains either closed or approved for continued use by DNREC?
7. Does your shop discharge any industrial wastewater to a public sewer?
8. If you discharge to a public sewer, do you meet the requirements of the Publicly Owned Treatment Works where your water is treated?
9. Does your shop discharge any industrial wastewater to a septic tank?
10. Have you called the Ground Water Discharges Section to make sure that your septic tank is correctly designed and permitted for your wastewater?
11. Do you post required signs prohibiting the discharge of industrial chemicals to non-industrial drainage outlets?
12. Are concentrated auto body materials ever discharged with your wastewater?
13. Do you ever sweep, blow, or wash "sweepings" down drains, sinks, or into water courses?
14. Do you follow any priority best management practices to avoid water pollution?
15. Have you implemented any water conservation practices?

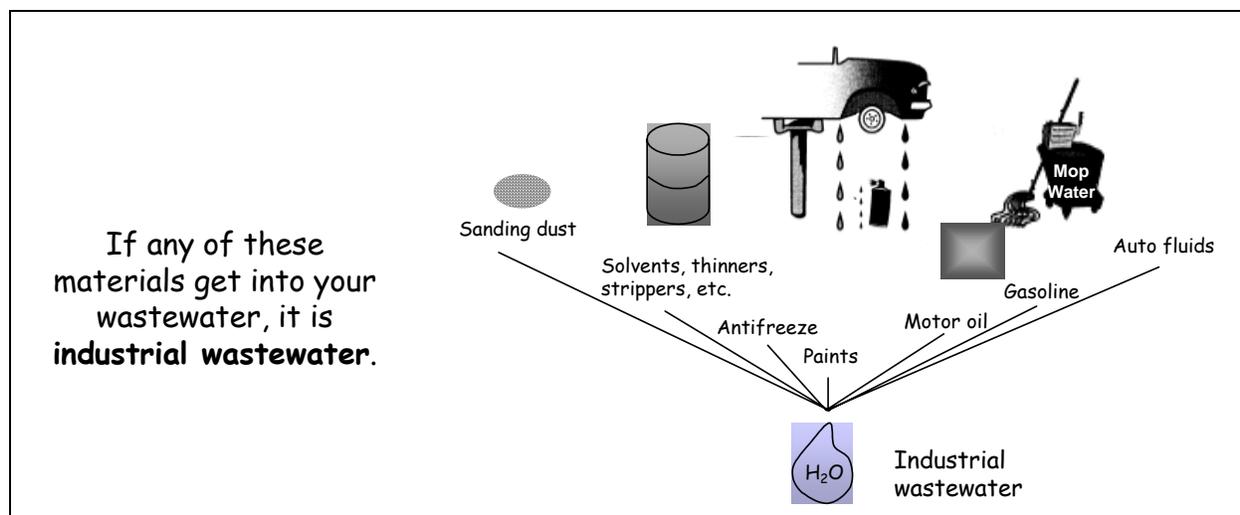
5.2 What is industrial wastewater?

Auto body repair involves the use of many materials that can pollute water supplies if they are not managed properly. For example, here are some of the materials from auto body shops that can contaminate Delaware's ground water supply if discharged to a conventional septic system:

- o Paints and paint residue, solvents, thinners, strippers, degreasers, and parts washers;
- o Gasoline, motor oil, and auto fluids (e.g., antifreeze, transmission fluid, power steering fluid, brake fluid, and hydraulic fluid) leaked from cars waiting to be repaired; and
- o Sanding dust or residue from wet sanding.

The picture on the next page shows some of the different materials that can contaminate your wastewater. If any of these materials gets into your wastewater, then it is industrial wastewater.

If you generate industrial wastewater, you have to meet special requirements that go beyond requirements for sanitary wastewater (i.e., bathroom or kitchen wastewater). You need to understand what goes into your wastewater and where it goes in order to know if you are following the law.



5.3 Where does your wastewater go?

Think about where the wastewater in your shop goes — does it get flushed down a sink, the toilet, a floor drain, or a storm sewer? Since industrial wastewater needs to be treated, you should never let it drain directly onto the ground, down the street, or into a storm sewer. You also should not flush it down the toilet, a kitchen sink, or another place designed for domestic wastewater. If you have a floor drain, you'll need to contact the DNREC Ground Water Discharges Section at 302-739-4762 to schedule an inspection.

Once your industrial wastewater goes down the drain, where does it end up? It might drain to a public sewer, septic system, dry well, cesspool, or surface leaching system. To find out, you can check your building's records, ask a plumber, or check with an environmental consultant. If your business is located in a rural area without central sewer, you may also contact DNREC's Ground Water Discharges Section at 302-739-4761 to see if those records are on file with DNREC. In almost all cases, you can only legally discharge your industrial wastewater to one of two places:

1. The public sewer system (but only if you meet the requirements of the water treatment plant); or
2. A septic tank with an oil/water separator (but only if you have contacted DNREC's Ground Water Discharges Section at 302-739-4762 to make sure your septic tank is designed to handle the wastewater you put into it, and to make sure you have the needed permits).

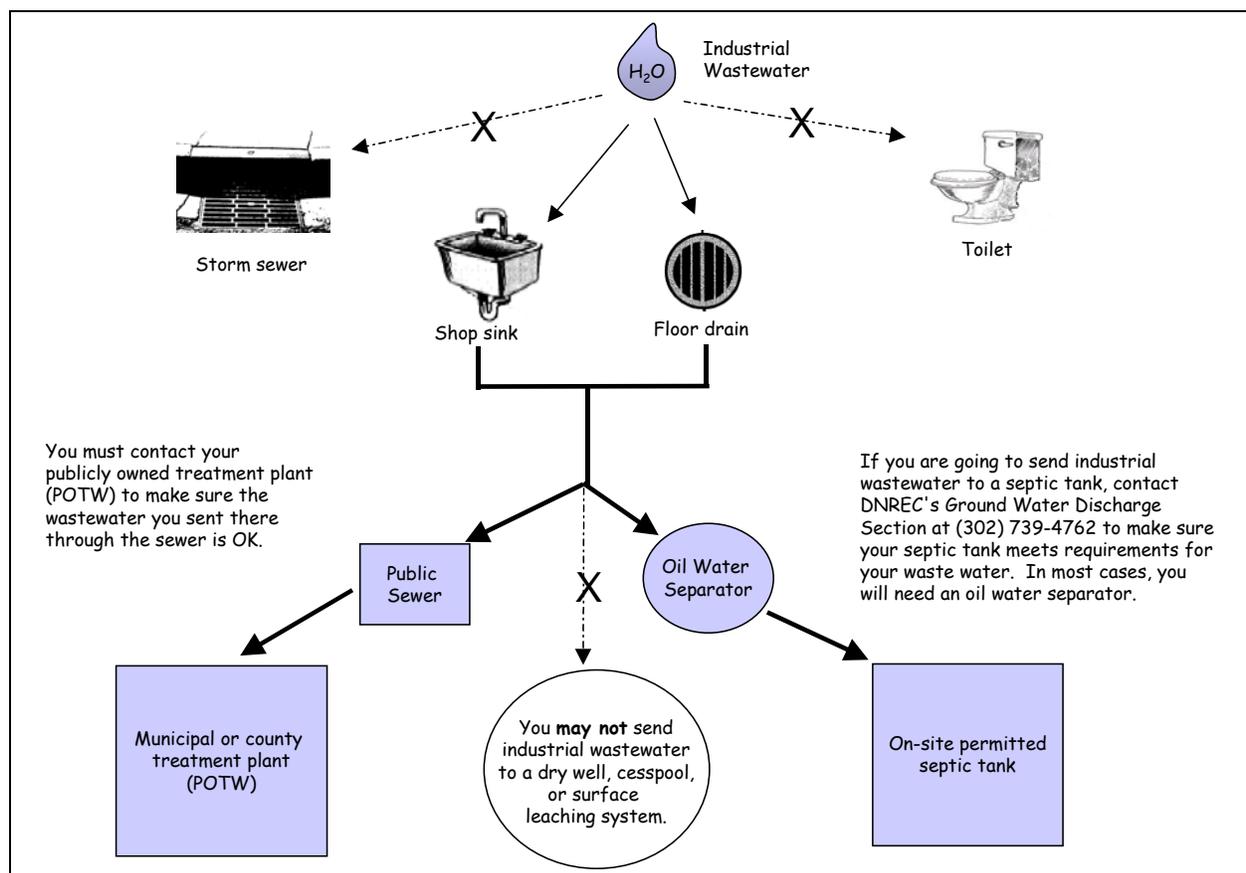
Discharge of industrial wastewater to dry wells, cesspools, galleys or other surface leaching systems is **not allowed**.² You should also be aware that you **must not** construct new septic systems,

² In special cases, you may be able to discharge to a "tight holding tank" that is pumped out by an authorized waste hauler (for example, if you are not on a public sewer now, but you have a contract to connect with a public sewer in less than five years). However, this is rare. You should contact DNREC's Ground Water Discharges Section at (302) 739-4761 for more information about requirements.

cesspools, dry wells, or other motor vehicle waste disposal wells that receive industrial wastewater from auto body repair work.

The following sections will help you comply with regulations for managing your industrial wastewater.

- **If you have any floor drains**, whether or not they have been sealed, read Section 5.3.1 below to find out what you must do to comply with current laws.
- **If your wastewater is discharged to a public sewer system**, read Section 5.3.2 to find out what you must do to legally connect to a sewer system.
- **If your wastewater is discharged to a septic tank**, read Section 5.3.3 to find out what you must do to legally install, operate and maintain your septic system.



5.3.1 Floor drains

If your shop has a floor drain, the first thing to do is contact the Ground Water Discharges Section at 302-739-4762 to schedule an inspection to determine if the floor drain needs to be permitted, abandoned, or simply inventoried.

All floor drains in Delaware auto body shops **must be closed by April 5, 2005**, unless they meet one of three conditions:

1. Floor drains are connected to a **public sewer**, and your shop meets the requirements of the Publicly Owned Treatment Works (POTW). (See Section 5.3.2 for more information.)
2. Floor drains are connected to a **permitted septic system with an approved, permitted oil/water separator**. (See Section 5.3.3 for more information on requirements for septic tanks.)
3. Floor drains **ONLY drain clean water** and do not have the *potential* to drain water contaminated with oil, fuel, or any other materials from auto body shop operations. For example, if you have a floor drain that could **only** receive condensation from an ice machine, that is OK.

If you do not meet the conditions above, you must close up your floor drains, and have DNREC come inspect that the floor drains are properly closed.

REQUIREMENTS FOR CLOSING A FLOOR DRAIN

You must ensure that your floor drains are properly closed and are inspected by DNREC's Underground Injection Control Program. This means you:

Do:

- ✓ Close your floor drain(s), either by hiring a licensed contractor or by doing the work yourself. If you do it yourself, pour cement or bentonite into the drain, filling it to floor level.
- ✓ Contact the Delaware Underground Injection Control Program (302-739-4762) to schedule an inspection to make sure your floor drain is properly closed.

REQUIREMENTS FOR USING EXISTING FLOOR DRAINS

You must seek approval for continued use of the existing floor drain and install an oil/water separator. This means you:

Do:

- ✓ Seek approval for continued use of open floor drains from DNREC's Underground Injection Control (UIC) program (302-739-4762).
- ✓ Install an oil/water separator, and get approval to operate it from the DNREC Tank Management Branch (302-395-2500).
- ✓ Contract with a waste hauling company to regularly come clean out the oil waste from the oil/water separator.
- ✓ Supply a copy of the signed waste hauling contract to the UIC program. A waste hauling contract must be maintained as long as the floor drain is connected to an oil/water separator.

5.3.2 Public sewer system

Sewer systems may receive both sanitary and industrial wastewater from auto body shops. If your shop's drains connect to a public sewer system, you must meet the following requirements:

REQUIREMENTS FOR DISCHARGING WASTEWATER TO A PUBLIC SEWER

You must make sure that the hook-up of your drains to the sewer is legal and that you have a wastewater discharge permit, pretreatment permit, and/or other proper documentation allowing your shop to discharge to the local sewer. This means you:

Do:

- ✓ Find out if there are any pretreatment requirements that apply to your shop, by contacting the Public Works Department of your municipality (or your county's Public Works Department, if your shop is on a regional system). The local sewage treatment plant that receives your wastewater may have requirements such as: limits on discharges to the sewer, prohibitions on certain discharges (such as solvents, gasoline, antifreeze, or waste oils), or requirements that your shop get a permit to discharge. Check the phone book for the telephone number of your municipal or county Public Works Department.
- ✓ Comply with all the requirements of the Public Works Department. If necessary, obtain a discharge permit, pre-treatment permit, and/or any proper documentation allowing discharge to the local sewer.

Don't:

- ✗ Discharge any flammable, hazardous, or explosive materials (e.g., gasoline) into your floor drains. For a specific list of materials you may not discharge to the sewer, contact your local Public Works Department.

5.3.3 Septic tank

Septic tanks are primarily designed to handle sanitary wastewater from sinks, showers, and toilets in your shop — **not** materials from your auto body work. If your shop is located outside the public sewer system, you may be prohibited from discharging industrial wastewater to your septic tank.

You may only discharge industrial wastewater to a septic system if your septic system is designed and permitted to handle the type of wastewater you put in it. Usually you will need an oil/water separator. In order to make sure your septic system meets these requirements, call DNREC's Ground Water Discharges Section at 302-739-4762. The staff there are prepared to give you one-on-one help to make sure your septic system is legal.

REQUIREMENTS FOR DISCHARGING INDUSTRIAL WASTEWATER TO A SEPTIC SYSTEM

You must make sure that your septic system is constructed, operated and maintained so that it does not pollute groundwater. This means you:

Do:

- ✓ Obtain a permit from DNREC's Ground Water Discharges Section at 302-739-4761 for installing, operating and maintaining a septic system that is designed to handle the type of wastewater your shop generates.
- ✓ If you discharge wastewater with oil or petroleum products into your septic system, or if otherwise directed by DNREC's Ground Water Discharges Section, you must properly install, operate and maintain an oil/water separator. This means you:
 - Seek approval from DNREC's Tank Management Branch (TMB) (302-395-2500) for installing an oil/water separator.
 - Hire a contractor to maintain the oil/water separator.
 - Contact DNREC's Ground Water Discharges Section at 302-739-4761 for scheduling an inspection to verify the installation of an oil/water separator.
 - Clean out the oil/water separator periodically.
 - Determine if the sludge and overflow from the oil/water separator is hazardous, and properly dispose of the sludge and overflow based on the waste determination (see Chapter 2 on Hazardous Waste Determination for more information).
- ✓ Hire a licensed wastewater hauler to pump your septic tank at least once every three years.
- ✓ Obtain a repair permit from Ground Water Discharges Section of DNREC when you need to repair the septic system. Only use licensed contractors when doing repair work.

REQUIREMENTS (CONTINUED)

Don't:

- ✗ Pour grease, paints, caustic or oily liquids, fuels, anti-freeze, or motor oils into sinks or toilets, or floor drains that connect to the septic tank. These can kill the bacteria and/or plug your disposal system.
- ✗ Plant any deep-root trees or shrubs within 10 feet of your disposal system. The roots can grow into the drainfield and reduce its capacity to handle wastewater.
- ✗ Construct any buildings or allow traffic over the drainfield and replacement area. Either action may result in costly damage and a violation of the law.

In addition to the above requirements, the following Best Management Practices (BMPs) are good ideas for managing and operating your septic system.

GOOD IDEAS

Do:

- ✓ Know the location of your septic system for repairs, pumping, and traffic and construction avoidance.
- ✓ Keep the septic system manhole location marked for easy accessibility.
- ✓ Keep your septic system records up to date:
 - Obtain a copy of the permit for your septic tank from the contractor or DNREC and keep it in the file. Contact the Ground Waste Discharge Section at 302-739-4761 to obtain a copy of your septic system permit.
 - File detailed records of all maintenance performed, inspections, and any problems.
 - Make a map or drawing of the location of your septic system if unable to get a copy of the permit.
 - Keep receipts and a record of pumping dates; a septic tank pumping log is include within this workbook .
- ★ *See the DNREC brochure "Simply Septics" in Appendix 12 for a copy of a sample pumping log.* ★
- ✓ Recover and recycle the oil from the oil/water separator with your shop's used oil. Recycling companies might take the oil for free, or might even pay you for the oil.
- ★ *See Appendix 12 for the DNREC brochure "Simply Septics," which has information on construction, operation and maintenance of a septic system.* ★

5.4 Preventing water pollution

The best ways to prevent water pollution are to: 1) use less water and 2) keep your wastewater clean and free of contaminants from your auto body work. The following bullets list some simple steps that your shop can take to prevent water pollution and, in some cases, save money.

REQUIREMENTS FOR PREVENTING WATER POLLUTION

You must take certain basic steps to prevent water pollution. This means you:

Do:

- ✓ Post signs prohibiting the discharge of industrial chemicals and/or industrial wastewater to bathroom or kitchen sinks, toilets, showers, shop wash basins, emergency showers, eyewash stations, or other non-industrial drainage outlets.

Don't:

- ✗ Discharge concentrated paints, fuels, oils or other fluids, solvents, thinners, strippers, cleaners (including concentrated soaps) or solid materials from sanding or auto body repair to wastewater.
- ✗ Sweep, blow, or wash floor dirt, dust, and/or other debris ("sweepings") down open floor drains, sink drains, or any other access way to water sources.

In addition to the above requirements, the following Best Management Practices (BMPs) are good ideas preventing water pollution. Especially important points covered on the self-certification form are listed in **bold**.

GOOD IDEAS

Do:

- ✓ Keep your floor clean and dry:
 - **Use dry cleaning methods, such as sweeping and vacuuming, when cleaning.** Sweep floor with a broom or vacuum every day. Use a slightly damp mop for general cleanups and after sweeping.
 - Seal your shop floor with impervious materials such as epoxy or another suitable sealant to make cleanup easier.
- ✓ Improve housekeeping:
 - **Keep all auto body materials (including waste) protected from rainwater, to prevent polluted runoff.**
 - Collect all unused paints for reuse or proper disposal.
 - Seal your dumpster so that water cannot get in or out.
 - Make sure spill cleanup equipment is well marked and easily available at all times.

- ✓ Prevent spills from reaching the floor:
 - **Use secondary containment for all chemicals, including paints, thinners, strippers, cleaners and automotive fluids.** This means that if the waste container leaks, there will be a second container to hold the spill.
 - Install drip pans and trays throughout the shop (e.g., under vehicles and wherever liquids are transferred).
 - Use funnel drum covers to minimize spills when transferring liquid.
 - Install bulk, pressurized, overhead fluid delivery systems.

- ✓ Clean up spills immediately:
 - If spills are gasoline or solvent, use absorbent material and dispose of it as hazardous waste. (See Section 2 - Hazardous Waste)
 - For small spills (those that can be cleaned up with three rags or fewer):
 - Wipe up spills with shop rags until the floor is dry. Shop employees should carry rags with them for this purpose.
 - Send your dirty rags to a commercial laundry that knows what materials your rags have soaked up and can handle them according to the law.
 - For larger spills:
 - First, mop up any oil with a hydrophobic mop (one that only absorbs oil, not water). Transfer used oil to a drum for recycling.
 - Then mop up any antifreeze with a cloth mop used *only* for antifreeze spills. Transfer antifreeze to a drum for recycling.
 - Use rags to dry the surface. Send rags to a commercial laundry, as described above.
 - Use a wet mop only for final cleaning.

- ✓ **Use less water:**
 - **Clean auto parts right away.** If you let dirty auto parts sit for a long time, dirt will get stuck on, and will take more water to get clean.
 - **Pre-clean equipment by wiping excess materials off with a shop towel prior to washing.** See Chapter 1 for more information on how to handle shop towels.
 - **Consider using a wastewater collection system to collect and recycle car wash water.**
 - **Make sure hose bibs are water-tight and water is not leaking from valves or fixtures.**

- ✓ Inform employees
 - Train staff in how to prevent water pollution as part of their job duties, such as the right way to clean up spills.

- ✓ Keep good records
 - Make sure your shop plans reflect current shop design. Be sure you understand where your wastewater drains.
 - Keep copies of any permits you have from DNREC and your wastewater treatment plant (if you are on a public sewer), and keep any contracts you have with septic pumping companies or other waste haulers.

Don't:

- ✗ Hose down work areas. Hosing creates a lot of extra industrial wastewater.
- ✗ Leave sprayers or hoses running when not in use.
- ✗ Allow wastewater to collect and soak into the ground.

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Appendices

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This section contains additional resources and information to help in environmental management at your shop. In this section, you will find:

- **Appendix 1: List of Recyclers for Fluorescent Lamps**
- **Appendix 2: Hazardous Waste Identification Assistance Table:** This table can help you determine whether your waste is hazardous. You can review this table when filling in the Hazardous Waste Identification Worksheet.
- **Appendix 3: Hazardous Waste Accumulation Area Weekly Inspection Checklist:** You can copy this form and use it for regular inspections of your hazardous waste accumulation areas.
- **Appendix 4: Sample Letter to Local Authorities:** You can use this sample letter as a model for writing a letter to your local police and fire departments, state emergency teams, and local hospitals to alert them to the hazardous wastes you handle at your shop.
- **Appendix 5: Sample Hazardous Waste Manifest:** You can use this sample hazardous waste manifest to keep track of hazardous waste that is shipped off site. This particular form is not required for CESQGs.
- **Appendix 6: Hazardous Waste Emergency List:** You can fill out this form and post it by your telephone as part of your emergency planning.
- **Appendix 7: Sample Emergency Preparedness Tools:** You can use these forms in planning for and responding to emergencies such as spills and fires.
- **Appendix 8: Sample Emergency Plan:** You can use this plan as a model for creating your own emergency plan, including emergency equipment, exit routes, and contact information.
- **Appendix 9: Estimating Your Shop's Air Emissions and Determining Your Shop's Air Emission Status:** You can use this appendix to determine whether your shop is a minor or major source of air pollution.
- **Appendix 10: Auto Body Air Permit Application (AQM-11 form):** You must fill out this form in order to apply for a Delaware Auto Body Air Permit.
- **Appendix 11: Applicant Background Information Questionnaire:** You must submit this form with your application for a Delaware Auto Body Air Permit.
- **Appendix 12: "Simply Septics" Brochure:** This is a guide for home owners about on-site wastewater treatment and disposal systems. Although this guide is designed for homes, not auto body shops, it contains a lot of useful information about septic tanks.

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Appendix 1:
LIST OF RECYCLERS FOR FLUORESCENT LAMPS AND BALLAST

BALLAST RECYCLING SERVICES

Ensquare, Inc.
P.O. Box 1056
Brookline, MA 02146
(617) 776-7320
(612) 828-9722

Lighting Resources, Inc.
Attn: John Chilcott
386 S. Gordon Street
Pomona, CA 91766
(714) 622-0881
(800) 572-9253

Salesco USA
Attn: Frank Sales
5736 West Jefferson
Phoenix, AZ 85043
(800) 368-9095

Environmental Energy Group
P.O. Box 50764
Denton, TX 76206
(817) 383-3632

Resource Recovery, Inc.
2506 35th Avenue SW
Fargo, ND 58104
(701) 234-9102

Salesco USA
Attn: Steve Walsh
40 Messina Drive
Braintree, MA 02184
(800) 368-8878

FullCircle Recyclers
Ron Waxell
1223 Clopton Bridge
Rochester Hills, MI 48306
(800) 775-1516
(810) 651-6589

Recovery, Inc.
7253 Washington Avenue
Edina, MN 55439
(612) 828-9722

Transformer Service, Inc.
74 Regional Drive
Concord, NH 03301
(603) 224-4006

SEE REVERSE FOR LIST OF FLUORESCENT LAMP RECYCLERS

FLOURESCENT LAMP RECYCLERS

The following is a list of lamp and ballast recyclers. Please note this list is only a partial representation of Recyclers and is updated periodically. This list should not be seen as an endorsement or approval of these facilities. Users of this list are encouraged to research the compliance status of any company they utilize by telephoning the implementing state agency. Should you have questions, please call the Delaware Hazardous Waste Management Branch at 302-739-3689.

Advance Env. Recycling Corp.
2591 Mitchell Avenue
Allentown, PA 18103
(215)797-7606
(800) 554-2372

Lamp Recyclers, Inc.
712 Packerland Drive
P.O. Box 10794
Green Bay, WI 53707-0794
(800) 558-1166

Resource Recovery, Inc.
2506 35th Avenue SW
Fargo, ND 58104
(701) 234-9102

Bethlehem Apparatus Co.
890 Front Street
Hellertown, PA 18055
(215)838-7034

Lighting Resources, Inc.
386 S. Gordon Street
Pomona, CA 91766
(800) 572-9253

Recovery, Inc.
7253 Washington Avenue
Edina, MN 55439
(612) 828-9722

Compliance Plus, Inc.
110 Pepperidge Road
Portland, CT 06480
(203) 342-2174

Luminaire Recycling, Inc.
2161 University Ave, Suite 206
St. Paul, MN 55114
(612) 649-0079

Salesco USA
Attn: Steve Walsh
40 Messina Drive
Braintree, MA 02184
(800) 368-8878

Dlubak's Glass Co.
274 Saxonburg Road
Natona Heights, PA 15055
(412) 224-6611

Mercury Recovery Services
2021 S. Myrtle
Monrovia, CA 91016
(818) 301-1372

Salesco USA
5736 West Jefferson
Phoenix, AZ 85043
(800) 368-9095

Dynex
6801 Industrial Loop
Greendale, WI 53129
(800) 249-3310

Mercury Refining Company
790 Watervliet-Shaker Rd
Latham, NY 12110
(800) 833-3505

Superior Env. Services
P.O. Box 500
Port Washington, WI 53074
(414) 284-9101

Dynex
23460 Industrial Park Drive
Farmington Hills, MI 48355
(800) 733-9639

Mercury Tech. of Minn., Inc.
2320 County Lane J
White Bear Lake, MN 55110
(612) 426-2102

USA Lights of Ohio
5366 Este Avenue
Cincinnati, OH 45232
(800) 778-6645

Dynex
4751 Mustang Circle
St. Paul, MN 55112
(800) 733-9639

Mercury Technologies of MN
P.O. Box 13
Pine City Industrial Park
Pine City, MN 55063-0013
(612) 629-7888

USA Lights
2007 County Road C-2
Roseville, MN 55113
(612) 628-9370

FullCircle Recyclers
Ron Waxell
1223 Clopton Bridge
Rochester Hills, MI 48306
(800) 775-1516
(810) 651-6589

Recyclights
2010 E. Hennepin Avenue
Minneapolis, MN 55413
(612) 378-9571

Global Recycling Technologies
P.O. Box 651
Randolph, MA 02368
(617) 341-6080

Recycling Technologies, Inc.
11930 W. Silver Spring Drive
Milwaukee, WI 53225
(414) 536-5166

Appendix 2: HAZARDOUS WASTE IDENTIFICATION ASSISTANCE TABLE

The following table is designed to help you identify hazardous wastes. The wastes listed here correspond to the wastes in the Hazardous Waste Identification Worksheet in Chapter 2. Note that wastes in rows 1 - 17 are ALWAYS hazardous. This table explains why. The wastes in rows 18-30 are POTENTIALLY hazardous. This table will help you determine whether or not these wastes are hazardous in your shop.

	Waste	Is it Hazardous?	Why?
1	Waste or Expired oil-(solvent-) Based Paint	Yes	Waste paints are ignitable as defined in the Federal Regulations if they have a flash point below 140° F.
2	Sludge or Bottoms from a Solvent Recycler or Still that Recycles Paint Gun Cleaner or Thinner	Yes	Still bottoms from a still where the solvent blend contained, before use, ten percent or more of solvents such as xylene, toluene, and acetone are hazardous waste. The mixture may also have a flash point below 140° F.
3	Sludges or Bottoms from Part Washers/Filters	Yes	They are hazardous wastes because they may contain toxic solvents or metals.
4	Sludges or Bottoms from Coolant or Antifreeze Filters/Stills	Yes	They are hazardous wastes because they may contain toxic solvents or metals.
5	Sludges or Bottoms from Hot Dip Tanks	Yes	They are hazardous wastes because they may contain toxic solvents or metals.
6	Methylene Chloride Paint Sludge Stripped from Vehicles	Yes	This waste is listed if the solvent blend contained, before use, ten percent or more of solvents such as methylene chloride, xylene, toluene, and acetone.
7	Paint Thinner	Yes	This waste is listed and characteristic if the solvent blend contained, before use, ten percent or more of solvents such as xylene, toluene, and acetone. The mixture also has a flash point below 140°F.
8	Paint Gun Cleaning Solvent	Yes	This waste is listed and characteristic if the solvent blend contained, before use, ten percent or more of solvents such as xylene, toluene, and acetone. The mixture also has a flash point below 140°F.
9	Solvent Degreasers	Yes, even if recycled onsite or at an off-site recycling facility	Many of the products used in repair shops for cleaning and degreasing contain ignitable or toxic solvents.
10	Parts Washing Fluid	Yes, even if recycled onsite or at an off-site recycling facility	Many of the products used in repair shops for cleaning and degreasing contain ignitable or toxic solvents.
11	Immersion Cleaners	Yes, even if recycled onsite or at an off-site recycling facility	Many of the products used in repair shops for cleaning and degreasing contain ignitable or toxic solvents.
12	Mineral Spirits (including petroleum naphtha)	Yes, even if recycled onsite or at an off-site recycling facility	Many of the products used in repair shops for cleaning and degreasing contain ignitable or toxic solvents.
13	Brake Cleaner	Yes, even if recycled onsite or at an off-site recycling facility	Many of the products used in repair shops for cleaning and degreasing contain ignitable or toxic solvents.

	Waste	Is it Hazardous?	Why?
14	Carburetor Cleaner	Yes, even if recycled onsite or at an off-site recycling facility	Many of the products used in repair shops for cleaning and degreasing contain ignitable or toxic solvents.
15	Waste Methylene Chloride Paint Stripper (Discarded Product)	Yes	The discarded material is a commercial chemical product listed for toxicity.
16	Mercury Switches (for example, this includes some switches used in trunk lighting and in anti-lock breaking systems)	Yes	Mercury is toxic and therefore mercury switches are hazardous waste.
17	Absorbent Materials, such as Speedi-Dry, Contaminated with Hazardous Waste	Yes	Absorbents soaked with materials that are considered hazardous waste also are hazardous waste.
18	Waste Aerosol Cans	Yes, but if cans are punctured, drained, and sent for scrap metal recycling they are not considered hazardous. Note that the drained fluids may be considered hazardous.	Aerosols like brake cleaner, carburetor cleaner, other degreasers, and spray paints commonly found at auto repair shops are hazardous for the chlorinated solvents they contain, or for ignitability. When discarded with unused contents, they are hazardous waste.
19	Waste Paint Booth Filters	Maybe	Paint booth filters may be toxic, especially when lead-based paints are used. They should be tested to determine whether they contain trace metals or organics that would cause them to be hazardous waste.
20	Waste Masking Paper or Tape Contaminated with Paint	Maybe	Masking paper or tape may be toxic, especially when lead-based paints are used. They should be tested to determine whether they contain trace metals or organics that would cause them to be hazardous waste.
21	Waste Sanding Dust	Generally not, unless you are sanding older cars	Paint dust from older vehicles may be hazardous waste. You may want to periodically test sanding dust to determine whether it contains toxic metals that would cause it to be hazardous waste.
22	Oil/Water Separator Sludge	Maybe	Wastewater separator sludge is considered hazardous waste if it is contaminated with materials that are considered hazardous waste. You should check what materials go into the wastewater to determine if the wastewater separator sludge is hazardous.
23	Oil/water Separator Overflow	Maybe	Wastewater is considered hazardous waste if it is contaminated with materials that are considered hazardous waste. You should check what materials go into the wastewater to determine if the oil/water separator overflow is hazardous.
24	Floor wash/rinse waters discharge	Maybe	Floor wash/rinse waters discharge is considered hazardous waste if it is contaminated with materials that are considered hazardous waste. You should check what materials are picked up by floor wash / rinse water to determine if your floor wash / rinse water is hazardous.

	Waste	Is it Hazardous?	Why?
25	Wastewater from a Water-based Parts Cleaner	Maybe	Wastewater is considered hazardous waste if it is contaminated with materials that are considered hazardous waste.
26	Electronic/computers	Yes, unless sent for reuse or sent to the Delaware Solid Waste Authority Electronic Goods Recycling Program	Electronic components (like printed circuit boards) and Cathode Ray Tubes of computer monitors are considered a hazardous waste. However, they are not considered hazardous waste if they are reused or if they are sent to the Delaware Solid Waste Authority Electronic Goods Recycling Program. For information on this program, call 1-800-404-7080.
27	Shop Towels/Rags Contaminated with Hazardous Waste	Maybe	Absorbents are considered hazardous waste if they are soaked with materials that are considered hazardous waste. But, in the case of rags/towels, if they are not soaked (dripping) and they meet the following conditions, they are not considered hazardous waste: 1.) They must be laundered at an appropriate facility (a commercial laundry that is permitted and sends its wastewater to the local sewage treatment plant, not a septic system or drain field), 2.) They must be stored in containers away from a source of ignition, 3.) No other waste can be mixed with rags.
29	Waste Gasoline	Not hazardous waste if recycled. If it is not recycled, it is hazardous waste.	Gasoline is ignitable and it is also toxic because it contains benzene.
30	Waste Coolant/ Anti-Freeze	Probably not.	Waste coolant/antifreeze may be considered hazardous if it is combined with a listed waste or if it contains a heavy metal (such as lead) which causes it to be classified as hazardous. In most cases, waste coolant/antifreeze from late model cars is non-hazardous. Remember: Even though coolant/antifreeze is not classified as a hazardous waste, it is poisonous. If a child or an animal eats antifreeze, it can become sick or die.

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**Appendix 3:
HAZARDOUS WASTE ACCUMULATION AREA
WEEKLY INSPECTION CHECKLIST**

Date and Time:	
Total Number of Containers:	

Inspected by:	
Signature:	

REQUIREMENTS	Meets Requirements	Changes Needed	Date Corrected
EACH CONTAINERS LABELED "HAZARDOUS WASTE"			
EACH CONTAINER HAS ACCUMULATION START DATE			
CONTAINER LABELS LEGIBLE			
CONTAINERS TIGHTLY CLOSED			
NO EVIDENCE OF RUST, DENTS, ETC.			
NO CONTAINER LEAKING			
aisle space is open and free of obstruction			
STORAGE IS LESS THAN (180 days for SQG, 90 days for LQG)			
WASTE IS SEGREGATED PROPERLY			
NO SMOKING SIGN CLEARLY VISIBLE			
SPILL ABSORBENT MATERIAL PRESENT			
NO STRANGE SMELLS ARE NOTED			
COMMUNICATION OR WARNING DEVICES WORKING			
FLAMMABLES ARE GROUNDED			

COMMENTS:

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Appendix 4:
SAMPLE LETTER TO LOCAL AUTHORITIES

(Date)

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

999 Emergency Road
Dover DE 19901

RE: My Company Inc., 191-Somewhere Road, Dover, Delaware 19901

Dear Sir:

In accordance with the federal and state hazardous waste regulations, My Company Inc. is required to notify you of our shop's hazardous waste activities. My Company Inc. is required to give local police, fire departments, hospitals, and state or local emergency response teams a layout of the shop, so they may become familiar with entrances to roads inside the shop, and possible evacuation routes. A copy of the shop layout is enclosed for your review and should be kept on file at your organization.

My Company Inc. is also required to familiarize local hospitals with the properties of hazardous waste handled at the shop and the types of injuries or illnesses that could result from fires, explosions, or releases at the shop. My Company Inc. deals with _____ waste, and this type of waste could cause _____ if an employee is exposed to it. A list of all the chemicals handled is maintained at the shop and a Material Safety Data Sheet for each can be supplied at your request.

We have also enclosed a copy of our emergency plan. The plan is designed to minimize hazards to human health and the environment from fires, explosions or any unplanned sudden or non-sudden release of hazardous waste to the air, soil or surface water. Please review and retain this plan in your files in the event of an emergency.

Thank you for your cooperation in this matter. Should you have any questions or desire to visit the shop, please contact me at (302) 999-9999.

Sincerely,

Bob Somebody
President
My Company Inc.

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**Appendix 6:
HAZARDOUS WASTE EMERGENCY LIST**

Important Phone Numbers:

Police _____

Fire _____

Delaware DNREC _____ 1-800-662-8802 _____

National Response Center _____ 1-800-424-8802 _____

Company Name _____

Directions (to shop) _____

Major Waste Types _____

**Emergency Coordinator(s)
Name(s) & Phone Number(s):**

Location of:

Fire Extinguisher(s) _____

Spill Control Material(s) _____

Fire Alarm(s) _____

First Aid Station(s) _____

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**Appendix 7:
SAMPLE EMERGENCY PREPAREDNESS TOOLS**

EMERGENCY RESPONSE INFORMATION:

Emergency Coordinator:

Name:

Telephone:

Spill-Control Materials Location(s):

Fire Alarm Location(s) (if present):

Fire Extinguisher Location(s):

Fire Department Telephone:

EMERGENCY RESPONSE PROCEDURES

In the event of a spill:

Contain the flow of hazardous waste to the extent possible, and as soon as possible clean up the hazardous waste and any contaminated materials or soil.

In the event of a fire:

Call the fire department and , if safe, attempt to extinguish the fire using a fire extinguisher.

In the event of a fire, explosion, or other release that could threaten human health outside the shop, or if you know that the spill has reached surface water (e.g., a lake or stream):

Call the National Response Center at its 24-hour hotline (1-800-424-8802). Call the Delaware Department of Natural Resources and Environmental Control at its 24-hour hotline (1-800-662-8802). Provide the following information:

Company Name:

Company Address:

US EPA Identification Number:

Date of Accident:

Time of Accident:

Type of accident (e.g., spill or fire):

Quantity of Waste Involved:

Extent of injuries (if any):

Estimated quantity and disposition of recovered materials, if any:

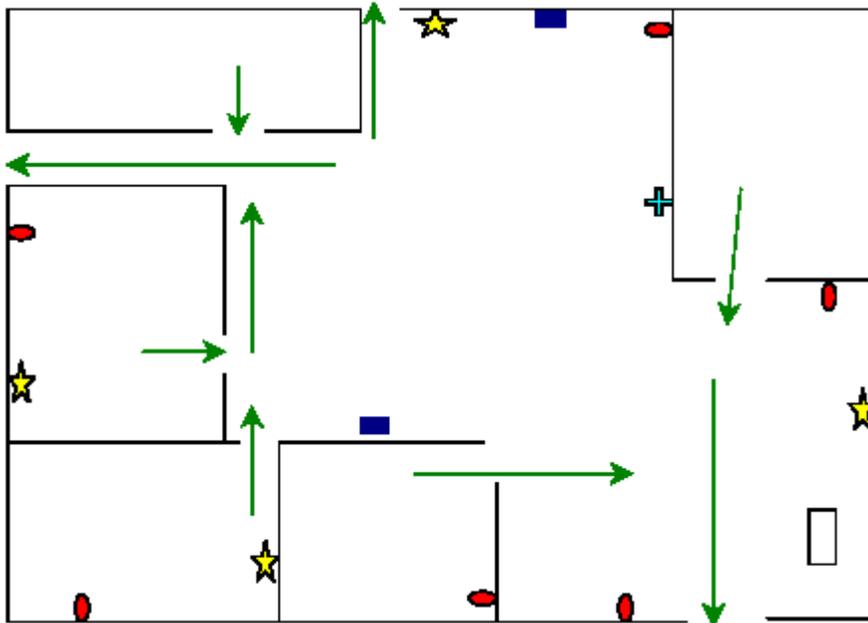
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Appendix 8: SAMPLE EMERGENCY PLAN

My Company Incorporated
191 Somewhere Road
Dover, Delaware 19901

Emergency Coordinator: _____(302) 999-9999
Dover Fire Department: (302) 999-9999
CHEMTREC: (800) 424- 9300
Dover Police Department: (302) 999-9999
Emergency Response: (302) 999-9999
Hospital: (302) 999-9999

- +** *FIRST AID KIT*
- *FIRE EXTINGUISHERS*
- *SPILL KITS*
- *EXIT ROUTES*
- ★** *FIRE ALARMS*



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Appendix 9: ESTIMATING YOUR SHOP'S AIR EMISSIONS AND DETERMINING YOUR SHOP'S AIR EMISSION STATUS

The Delaware and federal air pollution regulations regulate VOCs, particulates (including sanding dust and paint dust), and hazardous air pollutants (HAPs) generated from auto body repair activities. The example below shows how a shop determines its air emission status based on its total potential emissions of VOCs and HAPs per year.

Determine your potential to emit VOCs and HAPs by the following steps:

Step 1: Find out what the major source level for VOCs and HAPs is. The major source level is the threshold amount of VOCs and HAPs emissions at which the Delaware government considers a shop to be "major" releases of air emission. If your shop's emission of VOCs and HAPs is more than the major source level, your shop is subject to more stringent regulations, and is required to obtain a Title V operation permit.

- The major source level of HAPs is:
 - 10 tons/year for any single HAP
 - 25 tons/year for total HAPs
- The major source level of VOCs:
 - 25 tons/year if your shop is in Kent and New Castle Counties
 - 50 tons/year if your shop is in Sussex County

Step 2: Look at the Material Safety Data Sheets (MSDSs) of the materials you use to determine the specific VOC and HAPs content. **Review records of materials you purchased** in the last 12 months to determine your maximum usage. The list in Table 1 below gives the relevant input materials, their maximum usage, and their VOC and HAPs content based on the MSDSs.

Table 1. Maximum usage and pollutant content of inputs of Auto Body Shop ABC

Material	Usage (gal/year)	VOC content (lb/gal)	HAP content (lb/gal)
Pretreatment wash primers	450	6.5	1.0 (methylene chloride)
Primer surfacers	450	4.8	1.2 (methylene chloride)
Primer sealers	450	4.6	2.3 (Toluene)
Special coatings	1,000	7.0	1.5 (Toluene)
Cleaning solvents	450	7.0	2 (Toluene)

Step 3: Determine the potential to emit VOC and HAPs from each material used. To do this:

- Multiply a material's usage by its VOC content and HAPs content.
- Add the individual VOC emissions.
- Add the individual HAPs emissions.
- Change from pounds of VOCs and HAPs per year to tons of VOCs and HAPs per year. Do this by dividing the result you have by 2,000 (1 tons = 2,000 pounds).

For example, the total VOC emissions of Auto Body Shop ABC are:

Pretreatment wash primers:

450 gal/year * 6.5 lb/gal = 2,925 lb of VOC per year from Pretreatment wash primers
(usage) (VOC content)

Primer surfacers:

450 gal/year * 4.8 lb/gal = 2,160 lb of VOC per year from primer surfacers
(usage) (VOC content)

Primer sealers:

450 gal/year * 4.6 lb/gal = 2,070 lb of VOC per year from primer sealers
(usage) (VOC content)

Special coatings:

1,000 gal/year* 7.0 lb/gal = 7,000 lb of VOC per year from special coatings
(usage) (VOC content)

Cleaning solvents:

450 gal/year * 7.0 lb/gal = 3,150 lb of VOC per year from cleaning solvents
(usage) (VOC content)

Total potential to emit VOCs:

2,925 lb/yr	+	2,160 lb/yr	+	2,070 lb/yr	+	7,000 lb/yr	+	3,150 lb/yr	=	17,305	lb
(Pretreatment Wash Primer)		(Primer Surfacers)		(Primer Sealers)		(Special Coatings)		(Cleaning Solvents)		of total VOC	per year

Change from lb of VOCs to tons of VOCs by dividing 17,305 lbs by 2,000:

$17,305 \div 2,000 = 8.65$ tons per year of total VOCs

Assuming that Auto Body Shop ABC is in Kent County, the results show that Auto Body Shop ABC could only be a minor source of VOC emissions, since the maximum VOC emissions are less than the major source level of VOCs for Kent County, which is 25 tons per year.

The total HAPs emissions of Auto Body Shop ABC are:

Pretreatment wash primers:

450 gal/year * 1.0 lb/gal = 450 lb of methylene chloride per year from pretreatment wash primers
(usage) (HAP content)

Primer surfacers:

450 gal/year * 1.2 lb/gal = 540 lb of methylene chloride per year from primer surfacers
(usage) (HAP content)

Primer sealers:

450 gal/year * 2.3 lb/gal = 1,035 lb of Toluene per year from primer sealers
(usage) (HAP content)

Special coatings:

1,000 gal/year * 1.5 lb/gal = 1,500 lb of Toluene per year from special coatings
(usage) (HAP content)

Cleaning solvents:

450 gal/year * 2.0 lb/gal = 900 lb of Toluene per year from cleaning solvents
(usage) (HAP content)

Total potential to emit HAPs:

450 lb/yr	+	540 lb/yr	+	1,035 lb/yr	+	1,500 lb/yr	+	900 lb/yr	=	4,425	lb
(Pretreatment Wash Primer)		(Primer Surfacer)		(Primer Sealers)		(Special Coatings)		(Cleaning Solvents)		of total HAPs per year	

Change from lb of HAPs to tons of HAPs by dividing 4,425 lbs by 2,000:

$4,425 \div 2,000 = 2.21$ tons per year of total HAPs

Total potential to emit Methylene Chloride:

450 lb/yr	+	540 lb/yr	=	990 lb of total HAPs per year
(Pretreatment Wash Primer)		(Primer Surfacer)		

Change from lb of Methylene Chloride to tons of Methylene Chloride by dividing 990 lbs by 2,000:

$990 \div 2,000 = 0.50$ tons per year of total Methylene Chloride

Total potential to emit Toluene:

1,035 lb/yr	+	1,500 lb/yr	+	900 lb/yr	=	3,435 lb
(Primer Sealers)		(Special Coatings)		(Cleaning Solvents)		of total Toluene per year

Change from lb of Toluene to tons of Toluene by dividing 3,435 lbs by 2,000:

$3,435 \div 2,000 = 1.72$ tons per year of total Toluene

The results shows that Auto Body Shop ABC could only be a minor source of HAPs emissions, since its individual HAP emissions all lie below 10 tons per year (which is the major source level for individual HAPs), and its total HAPs emissions are less than the major source level of HAPs, which is 25 tons per year.

Appendix 10: Auto Body Air Permit Application

STATE OF DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL AIR POLLUTION CONTROL PERMIT APPLICATION				AQM-11 Page 1 of 2	
APPLICATION FOR PERMITTING AUTO BODY SHOPS PARTICIPATING IN THE AUTO BODY SELF-CERTIFICATION PROGRAM <i>This form must be submitted along with a completed 2004 Auto Body Self-Certification Form</i>				DEPARTMENT USE ONLY	
1. Name of Auto Body Shop		2. Date of Application		Permit Number	
3. Physical Location (Street Address)		City	County	Zip Code	Received Stamp
4. Mailing Address		City	County	Zip Code	
5. Name of Owner	6. Name of Person Signing This Application	7. Title of Person Signing This Application	8. Telephone		
9. If you marked "YES" to Question D.3 of the Auto Body Shop Self-Certification Form, provide the make and model of the ventilated sander used at your shop. Attach a manufacturer's specification or vendor data sheet.					
10. If you marked "YES" to Question D.8 of the Auto Body Shop Self-Certification Form, provide the number of spray booths at your shop and the make and model of each spray booth. Attach a manufacturer's specification or vendor data sheet. The manufacturer's specification or vendor data sheet should provide the following information at a minimum: the size of the spray booth, the fan speed or air flow rate from the spray booth, the stack height of the spray booth, the removal efficiency of the filters used in the spray booth, and the recommended pressure drop across the filters used in the spray booth.					
11. Provide the number of spray guns or other coating applicators used at the shop along with the make and model of each. Attach a manufacturer's specification or vendor data sheet.					
12. Provide a list and the annual quantity used of all of the coatings, reducers, catalysts, surface preparation products, and cleanup solvents used in the shop. Attach a Material Safety Data Sheet and Certified Product Data Sheet for each material.					

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
AIR POLLUTION CONTROL PERMIT APPLICATION

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of 2

13. Attach a shop plot plan or diagram or draw one here.

I, the undersigned, hereby certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all of its attachments as to the truth, accuracy, and completeness of this information. I certify based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete. By signing this form, I certify that I have not changed, altered, or deleted any portions of this application. I acknowledge that I cannot commence construction, alteration, modification or initiate operation until I receive written approval (i.e. permit, registration, or exemption letter) from the Department. I acknowledge that I may be required to perform testing of the equipment to receive construction or operation approval, and that if I do not receive approval to construct or operate that I can appeal the decision.

Owner or Authorized Agent

Signature of Owner or Authorized Agent

Date

**Appendix 11: Applicant Background Information
Questionnaire**



**DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL**

AUTO BODY SELF-CERTIFICATION PROGRAM
APPLICANT BACKGROUND INFORMATION QUESTIONNAIRE

PROVIDING ALL INFORMATION REQUESTED IN THIS FORM SATISFIES THE REQUIRMENTS OF 7 DEL. C. CHAPTER 79 UNLESS THE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL OR THE DEPARTMENT OF JUSTICE DETERMINES THAT ADDITIONAL SUBMISSIONS ARE NECESSARY. FAILURE TO PROVIDE THE INFORMATION REQUESTED OR PROVIDING ERRONEOUS INFORMATION IS GROUNDS FOR DENYING OR REVOKING AN ENVIRONMENTAL PERMIT, AND FOR CIVIL AND/OR CRIMINAL PENALTIES.

COMPANY NAME: _____

DATE OF APPLICATION: _____

A. Attach a complete list (full names) of all current owners of the company. In addition to providing the full name of each owner, please provide the following additional information for each individual:

1. Date of Birth
2. Driver's License Number (with name of State issuing license)
3. Social Security Number
4. State of Residence

B. Do any of the owners listed in Section A own any other companies?

- YES
- NO

If YES, proceed to Section B(1). If NO, proceed to Section C.

B(1). Attach a complete list of any other companies owned by any of the individuals listed in Section A. Include the name and address of the company, and the nature of the business.

C. Please check one of the following selections in Section C(1), showing the type of ownership for the company, and if applicable, in Section C(2), please provide the parent company name, and mailing address:

C(1). Proprietorship

Partnership List the County, Book record and page where the certificate is found on the lines provided below.

Corporation List the city, state, date of incorporation, Corporation File Number, Registered Agent, and address of the Registered Agent on the lines provided below.

Municipality

Public Institution

Other _____

C(2).

Parent Company Name: _____

Mailing Address: _____

D. Attach a description of any felony or other criminal conviction for any person, employee, or company identified in response to Sections A or B where the conviction resulted in a fine greater than \$1,000 or a sentence longer than seven days, regardless of whether any portion of such fine or sentence was suspended.

- Information Attached
- Not Applicable – No criminal convictions resulting in a fine greater than \$1,000 or a sentence longer than 7 days.

E. Have any of the following been issued to the company or any employee, person, entity, or affiliated company specified in response to Sections A or B, for the violation of any environmental statute, regulation, permit, license, approval, or order, regardless of the state in which it occurred, during the five years prior to the date of the application:

OFFENSE	YES	NO
Notices of Violation		
Administrative Penalties		
Administrative Orders		
Criminal Citations		
Arrests		
Convictions		
Criminal Penalties		
Civil Penalties		

F. If you answered YES to any of the items in Section E, attach a description of the incidents or events leading to the issuance of each enforcement action, the disposition of each action, what state the offense occurred in, and any actions that have been taken to correct the violations that led to such enforcement action.

- Information Attached
- Not Applicable - No violations within the specified time period.

G. Attach copies of any and all settlements of environmental claims associated with actions identified in response to Section E above, whether or not such settlements were based on agreements where the applicant did not admit liability for the action.

- Documents Attached
- Not Applicable – No violations within the specified time period or no settlements associated with the violation(s).

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Appendix 12:
SIMPLY SEPTICS BROCHURE:
A Guide for Delaware Homeowners about
On-Site Wastewater Treatment and Disposal Systems