

**TXD N 330.7 R339 NO.432**

**Environmental guide for Texas auto body shops**

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
RG-432, August 2006

*An Environmental Guide for*

**T E X A S**

# Auto Body

**S H O P S**

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Small Business and Local Government Assistance  
1-800-447-2827

## How Will This Guide Help Me?

As the owner or operator of an auto body shop, you have to stay on top of a number of different environmental regulations—rules that protect air quality, rules that affect the way you should manage your wastes, and rules that protect water quality. Knowing where to find these rules is challenging enough. Understanding how to comply with them might seem even more difficult.

To help you, we have developed this guide for auto body shops. “We” are the Small Business and Local Government Assistance (SBLGA) program of the Texas Commission on Environmental Quality (TCEQ). Our mission is to provide free and confidential assistance to business owners like you.

## What’s In This Guide?

In this guide, we discuss the main areas covered by environmental regulations:

- Air quality (Chapter 1)
- Waste management (Chapter 2)
- Water quality (Chapter 3)
- Pollution prevention (Chapter 4)

Use these chapters to make sure that your auto body shop has every environmental permit you need and that you are complying with the rules.

Chapters 1, 2, and 3 end with a list of the violations that TCEQ environmental investigators find most frequently when they inspect auto body shops. To make sure that your auto body shop does well during a TCEQ investigation, you might copy these lists and post them where your employees will see them every day.

At the end of this guide, you will also find appendixes that contain useful reference information:

- **Appendix A: Permit by Rule 106.436**
- **Appendix B: Auto Body Compliance Checklist**
- **Appendix C: Emissions Calculations**
- **Appendix D: Spray Booth Air Flow Specifications**
- **Appendix E: Acceptable Stack Designs**
- **Appendix F: Spray Booth Filter Disposal FAQ**
- **Appendix G: TCEQ Regional Offices**

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# **Auto Body**

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**Kathleen Hartnett White**, *Chairman*  
**Larry R. Soward**, *Commissioner*  
**Glenn Shankle**, *Executive Director*

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# Contents

<b>CHAPTER 1. CLEARING THE AIR</b> .....	2
<i>De Minimis</i> : What Is That? .....	2
Which Air Rules Apply to Me? .....	2
State Air Authorizations .....	3
Federal Operating Permits .....	5
What Else Should I Think About? .....	6
Common Air Violations for Auto Body Shops .....	7
<b>CHAPTER 2. DEALING WITH YOUR WASTE</b> .....	10
How Can I Follow TCEQ and EPA Waste Rules? .....	10
What Wastes Do I Generate? .....	11
What Is My Generator Status? .....	16
Do I Need to Register as a Generator? .....	19
What Records Do I Need to Keep? .....	20
How Do I Store My Wastes Properly? .....	21
How Can I Be Sure My Waste Is Transported and Disposed of Correctly? .....	23
Common Waste Violations for Auto Body Shops .....	23
<b>CHAPTER 3. PROTECTING THE WATER</b> .....	26
What Do I Need to Know About Domestic Wastewater? .....	26
What Do I Need to Know About Industrial Wastewater? .....	26
Common Water Violations for Auto Body Shops .....	27
<b>CHAPTER 4. PREVENTING POLLUTION</b> .....	30
How Can Pollution Prevention Benefit My Auto Body Shop? .....	30
How Do I Get a “P2” Program Started at My Auto Body Shop? .....	30
Is My Auto Body Shop Required to Report P2 Activities? .....	33
Which Other Agencies Might Regulate My Auto Body Shop? .....	33

## TABLES

1. Maximum Usage to Qualify as <i>De Minimis</i> .....	2
2. Summary of PBR 106.436, Auto Body Refinishing Facilities .....	3
3. Common Permits by Rule for Auto Body Shops .....	4
4. Major Source Emission Thresholds for VOCs .....	6
5. Wastes You Might Find at Your Auto Body Shop .....	11
6. Substances That Call for a TCLP if Found in Waste ...	14
7. Auto Body Shop Wastes That Might Be Characteristically Hazardous .....	15
8. Wastes Commonly Generated at Auto Body Shops .....	17
9. Common Waste Registration Forms .....	19
10. Common Forms Used for Waste Record Keeping and Reporting .....	20
11. Hazardous Waste Generator Categories .....	22
12. Common Processes and Wastes for Auto Body Shops .....	31

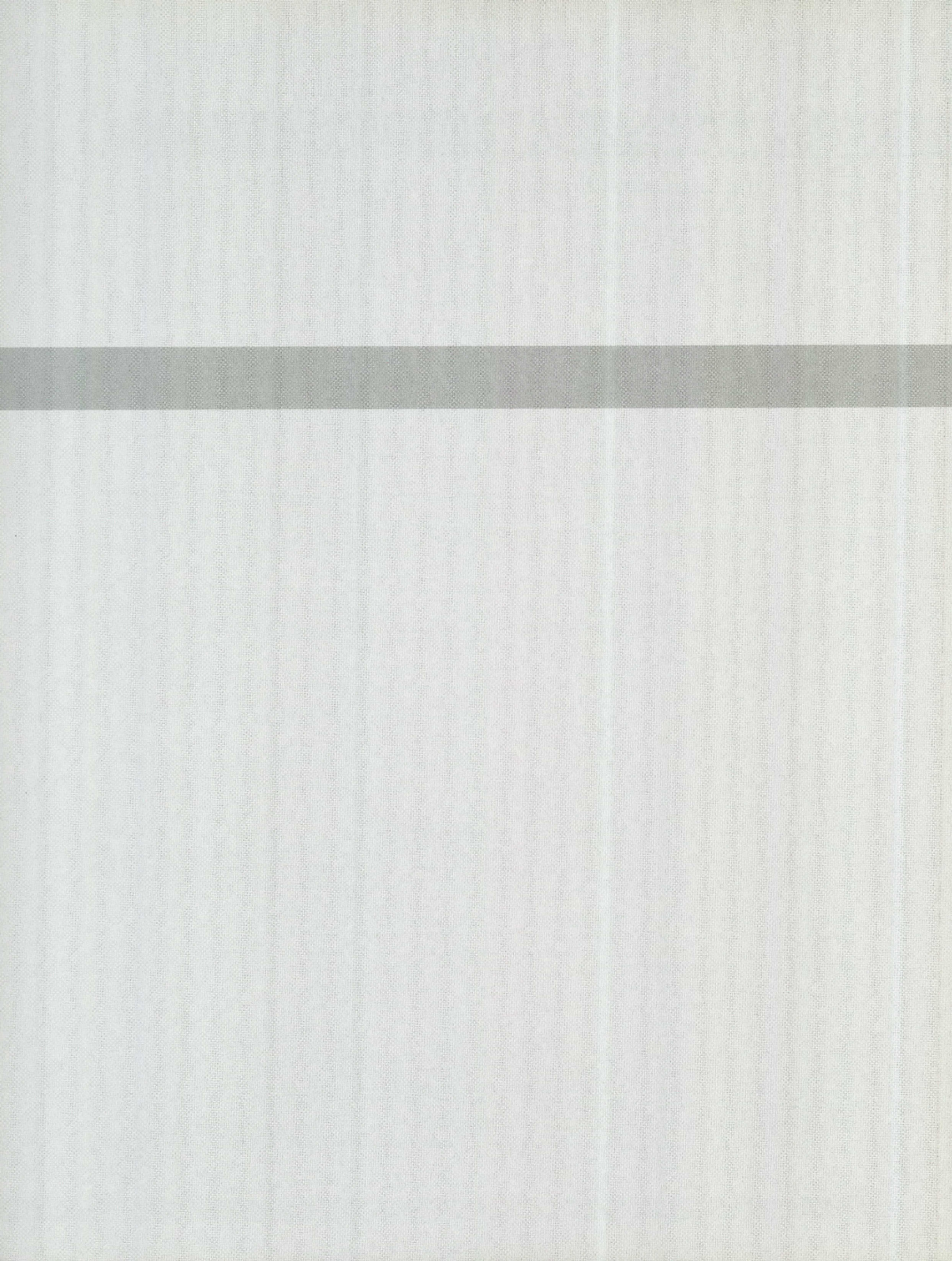
13. Auto Body Shop Waste Streams and Associated Costs .....	31
14. Comparison of the Cost of Hazardous vs. Nonhazardous Solvent .....	32
15. Comparison of the Cost of Conventional vs. HVLSP Spray Gun .....	32

## APPENDIXES

A. Permit by Rule 106.436 .....	36
B. Auto Body Compliance Checklist .....	38
C. Emissions Calculations .....	45
D. Spray Booth Air Flow Specifications .....	48
E. Acceptable Stack Designs .....	50
F. Spray Booth Filter Disposal FAQ .....	51
G. TCEQ Regional Offices .....	53

## FIGURE

1. Hazardous and Nonhazardous Wastes .....	12
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## **Chapter 1**

# **Clearing the Air**

### **In this chapter . . .**

<b>De Minimis: What Is That?</b> .....	2
<b>Which Air Rules Apply to Me?</b> .....	2
<b>State Air Authorizations</b> .....	3
Permits by Rule (PBRs) .....	3
Auto Body Refinishing Facility PBR (30 TAC 106.436) .....	3
Who Can Register Under a PBR? .....	5
Standard Permits .....	5
State Air Quality Permit .....	5
<b>Federal Operating Permits</b> .....	5
Am I a Major Source? .....	6
<b>What Else Should I Think About?</b> .....	6
General Statewide Restrictions .....	6
Don't Be a Nuisance .....	6
Go Easy on the Eyes .....	6
Special Requirements for Nonattainment and Near-Nonattainment Areas .....	6
VOC Content Limits .....	7
Can I Use a Coating Above These VOC Limits? .....	7
How Do I Calculate This "Daily Weighted Average"? .....	7
General Requirements .....	7
The Emissions Inventory .....	7
<b>Common Air Violations for Auto Body Shops</b> .....	7

# Clearing the Air

**M**any businesses, auto body shops included, emit at least some chemicals into the air. To protect yourself, your employees, your neighbors, and the environment, it's important to make sure that you do all you can to reduce emissions at your auto body shop.

As part of its role in protecting public health and the environment, the TCEQ requires you to get the proper air authorization if your auto body shop produces emissions above a minor level known as *de minimis*. Under the law, you are supposed to get this authorization **before** you build, modify, or start operating your auto body shop.

It once was the case that many small businesses could be “grandfathered” and not need a state air authorization, but “grandfathering” ended September 1, 2004. If you are still operating as a “grandfathered” facility, call us to discuss your options.

## De Minimis: What Is That?

“*De minimis*” is Latin for “of the least.” It’s a legal term, meaning “of little significance.” So businesses are considered *de minimis* sources if they generate an insignificant level of emissions.

Depending on the amount of coatings, solvents, and other materials you use on an annual basis, your auto body shop might qualify as a *de minimis* source. If you think you might qualify, take the following two steps:

**Check your material usage rate.** Table 1 lists the relevant materials and the amount of each that you can use in any one year at your auto body shop without needing an air authorization.

**Keep records.** If you want to claim *de minimis* status, you must

keep records to prove that you qualify. Purchase receipts, work orders, and operating records would all be helpful.

If your auto body shop is considered a *de minimis* source, then you don’t need a state air authorization. But, you must keep records that prove your *de minimis* status. The rules that explain the *de minimis* criteria can be found in 30 TAC 116.119.

## Which Air Rules Apply to Me?

If your auto body shop is not a *de minimis* source, you must take one or more of these steps:

- **Get a state air authorization.** For auto body shops, a “state air authorization” can be a permit by rule or an air quality permit. You may need more than one of these authorizations.
- **Get a federal operating permit (FOP).** Only a major source of air emissions would need an FOP. For more on major sources, see Table 4.
- **Meet other requirements.** These requirements are discussed under “What Else Should I Think About,” later in this chapter. Some of these requirements apply statewide. Others apply only in specific counties.

**Table 1. Maximum Usage to Qualify as De Minimis**

Material:	To be <i>de minimis</i> , you must use no more than:
Cleaning or stripping solvents	50 gallons a year
Coatings (other than plating materials)	100 gallons a year
Dyes	1,000 pounds a year
Bleaches	1,000 gallons a year
Fragrances (other than odorants)	250 gallons a year
Water-based surfactants or detergents	2,500 gallons a year



Even if your site is already in operation, if it exceeds the *de minimis* level of emissions, you will still need at least one of the above air authorizations. You should begin steps to obtain one as soon as you become aware that this requirement applies to you. For more information on how to proceed if you find yourself in this situation, call SBLGA at 1-800-447-2827.

## State Air Authorizations

Whether your auto body shop must have one or more types of air authorizations has nothing to do with the number of employees you have or any financial aspects of your business. Instead, you and the TCEQ must consider these three factors:

- the process and materials used at your auto body shop
- the amount of chemicals used at your auto body shop
- the amount of air pollution you create at your auto body shop

## Permits by Rule (PBRs)

After the factors listed above have been considered, most small auto body shops usually will qualify for a permit by rule. PBRs have specific, non-negotiable conditions that your business must meet. You can save time—and money—if your business qualifies for a PBR. A PBR is approved more quickly than an air quality permit, and less reporting is necessary.

However, you must still keep accurate records and documents to verify that your auto body shop meets the conditions for any PBR you claim. And

before you change any of your processes, consider how the change would affect factors that allowed you to get a PBR. It could be that to change a process you would first have to apply for a new type of air authorization. The complete list of permits by rule can be found in 30 TAC, Chapter 106.

More than one PBR could apply to your business. Table 3 lists the common PBRs used by your industry.

## Auto Body Refinishing Facility PBR (30 TAC 106.436)

The PBR that is used by most auto body shops is 106.436. This PBR specifically authorizes air emissions from auto body refinishing facilities based upon the amount of materials used and the size of the part that is being painted. In order to determine if your shop can meet 106.436, you must first determine how many coatings and solvents you use. Then, based on these usage amounts **and** the size of the parts that you paint, there are four possible usage categories that your auto body shop can fit into:

1. Less than 1/2 pint of coatings and solvents per hour
2. More than 1/2 pint of coatings and solvents per hour, BUT less than 2 gallons per week
3. More than 2 gallons of coatings and solvents per week, BUT always coat less than nine square feet (one panel) at a time
4. More than 2 gallons of coatings and solvents per week, AND coat more than nine square feet (one panel) at a time

Table 2 summarizes the requirements of PBR 106.436. For the complete text of this PBR, see Appendix A. Please note that requirement 14 limits the

**Table 2. Summary of PBR 106.436, Auto Body Refinishing Facilities**

If your auto body shop uses:	And the size of the part you coat is:	Then the area you paint in:	As long as you meet the following requirements of 106.436:
less than 1/2 pint of coatings and solvents per hour	unlimited	may be any location	3, 4, 16, and 17
more than 1/2 pint of coatings and solvents per hour but less than 2 gallons per week	unlimited	may be any location	3, 4, 8, 12, 14, 16, and 17
more than 2 gallons of coatings and solvents per week	less than nine square feet (one panel)	may be one that is not totally enclosed	1, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18
more than 2 gallons of coatings and solvents per week	more than nine square feet (one panel)	shall be a totally ventilated enclosed filtered spray booth or spray area	1, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18

allowable VOC content in the coatings you use. If you are subject to 14 you must meet these limits, which are found in 115.421. This part of the rule usually applies only to facilities located in nonattainment or near-nonattainment areas, but PBR 106.436(14) requires facilities to meet these limits regardless of

their location within the state. Please see page 7 for more details on VOC content limits.

Other activities commonly performed at an auto body shop may require additional permits by rule. Table 3 provides an outline of the most common PBRs for an auto body shop.

**Table 3. Common Permits by Rule for Auto Body Shops**

Type of Work	PBR Number	Applicability	Required Paperwork
Auto Body Refinishing	106.436	Auto body shops may qualify to use this PBR if the facility meets and operates under the conditions outlined in Table 2.	Submission of a TCEQ PI-7 form <u>may</u> be required.  Keep the following records for the most recent 24 months:-MSDS sheets • Monthly paint and solvent purchase(s) • Monthly paint and solvent usage
Classic or Antique Automobile Restoration	106.435	Auto body shops may qualify to use this PBR provided they <b>only</b> restore vehicles that are 25 years or older	No paperwork is required to be submitted to the TCEQ.  There are limits on the use of abrasives and coatings. Materials usage records must be kept for 2 years.
Degreasing (Parts Washing)	106.454	Auto body shops that use parts washers or other equipment for degreasing may qualify to use this PBR.	Submission of a TCEQ PI-7 form <u>may</u> be required.  If submission of the PI-7 is not required, sign and date a copy of the PBR and keep it in your records.
Thermoset Resin (Fiberglass) Repairs	106.392	Auto body shops that use thermoset resins (fiberglass) to perform repairs may use this PBR.	Submission of a TCEQ PI-7 form <u>may</u> be required.  Keep the following records for the most recent 24 months: • Resin usage • Acetone usage
Milling & Grinding of Coatings & Molding Compounds	106.431	Auto body shops that use equipment to mill or grind coatings and molding compounds.	No paperwork is required to be submitted to the TCEQ.  Review, sign, and date a copy of the PBR and keep in your records.
Washing & Drying of Glass & Metal	106.453	Auto body shops that use equipment for washing or drying products fabricated from metal or glass may use this PBR so long as no volatile organic materials are used in the process and no oil or solid fuel is burned.	No paperwork is required to be submitted to the TCEQ.  Review, sign, and date a copy of the PBR and keep in your records.
Use of Hand-held & Manually Operated Machines	106.265	Auto body shops that use hand-held or manually operated equipment for such things as buffing, grinding, and polishing may claim this PBR.	No paperwork is required to be submitted to the TCEQ.  Review, sign, and date a copy of the PBR and keep in your records.
Soldering, Brazing, Welding	106.227	Auto body shops that perform brazing, soldering, or welding.	No paperwork is required to be submitted to the TCEQ.  Review, sign, and date a copy of the PBR and keep in your records.

## Who Can Register Under a PBR?

An auto body shop that generates small amounts of air pollution may claim a PBR as long as it can meet all the conditions of the PBR and its emissions fall within certain limits. These general limits, explained in 30 TAC, Section 106.4, are:

- No more than 25 tons per year of volatile organic compounds (VOCs), sulfur dioxide (SO<sub>2</sub>), small particulate matter (PM<sub>10</sub>), or other air contaminants (not including carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen).
- No more than 250 tons per year of carbon monoxide (CO) or nitrogen oxides (NO<sub>x</sub>).

If your facility does not qualify for a PBR, you have two options:

- **Option 1.** Modify your processes or equipment to meet the requirements of the applicable PBR.
- **Option 2.** Apply for a state air quality permit.

Some PBRs require you to register with the TCEQ.

**How do I register?** To register, you submit a TCEQ PI-7 form with the appropriate attachments, maps, and emissions calculations. You will also need to pay a fee. To get copies of TCEQ forms, follow the instructions on this booklet's back cover or go to the TCEQ web site, [www.tceq.state.tx.us](http://www.tceq.state.tx.us). Look for "Forms & Publications" at the left side of the web page.

The most common PBRs for an auto body shop are listed in Table 3. Also, Appendix A has the complete text of PBR 106.436, which is the primary PBR for auto body shops.

## Standard Permits

Standard permits are used for only a specific type of business. Since auto body shops are not eligible to apply for a standard permit, you should consider another type of air authorization for your facility.

## State Air Quality Permit

If your auto body shop cannot qualify for a *de minimis* designation or a PBR, then you must have a state air quality permit. To obtain a permit, you must complete these steps:

- Submit TNRCC Form PI-1.
- Pay the appropriate fee.
- Submit more details about your auto body shop.



- Place a public notice in a prominent newspaper if required, and post signs to announce that you have applied for an air quality permit.
- If required, participate in a public hearing for affected parties to state whether they think that you should receive a permit.

Once your application is approved, the TCEQ mails your permit to you. Do not begin to modify or build your auto body shop until you have received your permit. If you have questions about the permitting process, or have already started construction without authorization, please call SBLGA at 1-800-447-2827 for assistance.

## Federal Operating Permits

Any business classified as a "major source" of criteria pollutants must comply with additional regulations and obtain a federal operating permit. Whether you are a major source depends on the amount of pollution your business has the potential to emit (PTE), and the county where your business is located.

## Am I a Major Source?

To find out if you are a major source, you must:

- calculate your potential emissions (go to Appendix C for a step-by-step explanation), **and**
- compare your potential emissions to the “threshold” amounts shown in Table 4.

If your potential emissions are greater than the corresponding threshold in Table 4, then your auto body shop is a major source. Generally, auto body shops do not use enough paints, thinners, and other products containing volatile organic compounds (VOCs) or hazardous air pollutants (HAPs) to qualify as major sources. But, it is *your responsibility* to make sure that your facility is not a major source—and the only way you can be sure is to calculate your emissions and compare them to the thresholds for your area.

If you want more information on federal operating permits, call SBLGA at 1-800-447-2827.

## What Else Should I Think About?

In addition to the state and federal air permits, there are other restrictions and possible requirements:

- General statewide restrictions
- Special requirements for facilities located in a nonattainment or near-nonattainment area
- Emissions Inventory

## General Statewide Restrictions

### Don't Be a Nuisance

No facility in Texas may create “nuisance” emissions, including odors, “that adversely affect human health or welfare, animal life, vegetation, or the normal use and enjoyment of property.”

### Go Easy on the Eyes

TCEQ regulations also specify that you may not release “particulate matter” (PM) that is visible into the air unless you have special authorization to do so. PM are fine particles of matter.

## Special Requirements for Nonattainment and Near-Nonattainment Areas

These are special requirements that apply to facilities located in specific counties in Texas that don't meet minimum federal air quality standards. These counties are located in nonattainment and near-nonattainment areas of the state. For a list of these counties, see Table 4.

One of the special requirements for facilities in these counties sets a limit on the VOC content of the paints and coatings you use. This requirement can be found in 30 TAC Chapter 115, Section 421 or on TCEQ's Web page ([www.tceq.state.tx.us](http://www.tceq.state.tx.us)) by following the link for “Rules.” The Material Safety Data Sheet

**Table 4. Major Source Emission Thresholds for VOCs**

Near-Nonattainment Area Threshold <sup>1</sup>	Nonattainment Areas and Pollutant Thresholds <sup>2</sup>				Statewide HAP Thresholds
	Beaumont–Port Arthur Area	Dallas–Fort Worth Area	Houston–Galveston Area	El Paso Area	
Gregg, Nueces, & Victoria Counties	Hardin, Jefferson, & Orange Counties	Collin, Dallas, Denton, & Tarrant Counties	Brazoria, Chambers, Galveston, Harris, Liberty, Montgomery, Waller, Fort Bend Counties	El Paso County	Thresholds: 10 tpy single HAP,  25 tpy all HAPs combined
Nonattainment Status: <i>Near-Nonattainment</i>	Nonattainment Status: <i>Moderate</i>	Nonattainment Status: <i>Serious</i>	Nonattainment Status: <i>Severe</i>	Nonattainment Status: <i>Serious</i>	
VOC Threshold: 100 tpy <sup>3</sup>	VOC Threshold: 100 tpy	VOC Threshold: 50 tpy	VOC Threshold: 25 tpy	VOC Threshold: 50 tpy	

**Note:** “Nonattainment” areas do not meet federal clean air standards.

<sup>1</sup>The Austin and San Antonio areas are expected to be classified as near-nonattainment or nonattainment in the future.

<sup>2</sup>The threshold for VOCs in counties not listed in this table is 100 tons per year (tpy).

<sup>3</sup>Tons per year.

(MSDS) or product label for each coating should indicate the VOC content in pounds per gallon (lb/gal). You have several options for complying with this rule:

- Use coatings that comply with the VOC content limits.
- Use add-on controls with overall 80 percent control efficiency.
- Be exempt because of
  - ▼ the quantity of VOC emissions (that is, less than 3 lb/hr and 15 lb/day);
  - ▼ the quantity of product used (total coatings and solvent less than 150 gallons per year);
  - ▼ the type of products used; or
  - ▼ other unusual circumstances (all exemptions require approval of the TCEQ and/or the EPA).

This is just one of several requirements that apply to body shops located in nonattainment and near-nonattainment counties. For more information on these special rules, call SBLGA at 1-800-447-2827.

### VOC Content Limits

The following limits for vehicle refinishing activities are given in pounds of VOC per gallon of coating, minus water and exempt solvent. See 30 TAC Chapter 115 Section 421 for the most current limits, which are subject to change.

Coating Category	VOC Limit (lbs of VOC/gal)
Primer or Primer Surfacer	5.0
Precoats	5.5
Pretreatments	6.5
Single-stage Topcoats	5.0
Basecoat/Clearcoat Systems	5.0
Three-Stage Systems	5.2
Specialty Coatings	7.0
Sealers	6.0
Wipe-down Solutions	1.4

### Can I Use a Coating above These VOC limits?

Yes; instead of proving that each of your coatings meets the content limits, you may demonstrate that the "daily weighted average" of the coating VOC content does not exceed the limit.

### How Do I Calculate This "Daily Weighted Average"?

For example, the VOC limit for coatings used for single-stage topcoats in an ozone nonattainment area

is 5.0 lb/gal. If you use 1 gallon of a 6.0 lb/gal VOC coating and 3 gallons of a 4.0 lb/gal VOC coating in one day, your daily weighted average would be 4.5 lb/gal and would fall below the 5.0 lb/gal limit.

$$\left( \frac{(1 \text{ gal} \times 6.0 \text{ lb/gal}) + (3 \text{ gal} \times 4.0 \text{ lb/gal})}{4 \text{ gal}} \right) = 4.5 \text{ lb/gal average}$$

These VOC limits must be followed even if you are a de minimis source or claim a PBR. For more information about VOC limits, call SBLGA at 1-800-447-2827.

## General Requirements

No facility in Texas may create "nuisance" emissions, including odors, "that adversely affect human health or welfare, animal life, vegetation, or the normal use and enjoyment of property." TCEQ regulations also specify that a facility may not release visible emissions (fine particles of matter that can be seen by the naked eye) into the air.

## The Emissions Inventory

You may have to send the TCEQ an annual report called an "Emissions Inventory" in either of the following cases:

- Your auto body shop is a "major source" of air emissions (see Table 4), or
- Your auto body shop is in a nonattainment area (see Table 4) and gives off at least 10 tons per year of VOCs.

These reports help track and plan the state's progress in reducing air pollution. For details about the Emissions Inventory, call SBLGA at 1-800-447-2827.

## Common Air Violations for Auto Body Shops

Inspections by the TCEQ show that the five most common air violations are:

- **Operating without an air authorization:** The body shop either does not qualify for or has not applied for an air authorization such as Permit by Rule 106.436.
- **Using noncompliant coatings:** The body shop is using paints that contain VOCs above regulatory limits.

- **Not following the requirements of an air authorization:** The body shop has claimed an air authorization but is not following all of the requirements.
- **Creating a nuisance:** The body shop is creating a nuisance condition through such things as visible emissions or odors.

- **Not keeping good records:** The body shop is not keeping detailed enough records to show that the site meets the conditions of its air authorization.

## Chapter 2

# Dealing With Your Waste

### In this chapter . . .

<b>How Can I Follow TCEQ and EPA Waste Rules?</b> .....	10
<b>What Wastes Do I Generate?</b> .....	11
Identify Each Waste .....	11
Identify and Classify Each Hazardous Waste .....	11
How Can I Tell That a Waste Is Hazardous? .....	12
How Can I Use the EPA Lists? .....	12
How Do I Know if My Waste Has a Hazardous Characteristic? ...	13
Wait—Is It “Universal Waste”? .....	14
Why Consider Calling It “Universal Waste”? .....	15
Classify and Manage Your Nonhazardous Wastes .....	15
How Do I Manage My Nonhazardous Waste? .....	15
<b>What Is My Generator Status?</b> .....	16
Conditionally Exempt Small-Quantity Generator (CESQG) .....	16
Small-Quantity Generator (SQG) .....	18
Large-Quantity Generator (LQG) .....	18
“Episodic” Generator .....	19
<b>Do I Need to Register as a Generator?</b> .....	19
<b>What Records Do I Need to Keep?</b> .....	20
Waste Stream Documentation .....	20
Waste Shipment and Disposal Documentation .....	20
<b>How Do I Store My Wastes Properly?</b> .....	21
Option 1: Waste Management Units (WMUs) .....	21
Option 2: WMUs Plus Satellite Accumulation Areas .....	22
<b>How Can I Be Sure My Waste Is Transported and Disposed of Correctly?</b> .....	23
1. Find a Qualified Transporter .....	23
2. Know the Disposal Facility .....	23
<b>Common Waste Violations for Auto Body Shops</b> .....	23

# Dealing With Your Waste

**A**uto body shops generate a variety of wastes in many forms. A waste is any item that is generated at your auto body shop that is no longer needed. A waste can be something as simple as a sheet of paper or as complex as out-of-date chemical products. Before you throw anything away, take time to find out if you'll be in compliance with state and federal waste regulations.

## How Can I Follow TCEQ and EPA Waste Rules?

Fortunately, complying with the many different state and federal waste rules boils down to being able to answer the following six questions, in the order given.

1. **What wastes do I generate?** Before you can tell how you should handle wastes from your auto body shop, you must first figure out what wastes you generate and what types of wastes they are. This is the process of classifying your wastes. To find out how, see "What Wastes Do I Generate?" later in this chapter.
2. **What is my generator status?** All auto body shops must determine their generator status, which is based on the amount of hazardous waste they generate on a monthly basis. Once you know the generator status of your auto body shop, you can then make decisions about how you must manage, report, and dispose of wastes. To learn more about how to determine your generator status, see "What Is My Generator Status?" later in this chapter.
3. **Do I need to register as a generator?** Some auto body shops may be required to register with the TCEQ and EPA as waste generators. In order to register, you first have

to know what wastes you generate and what your generator status is. For details on registering as a generator, see "Do I Need to Register as a Generator" later in this chapter.

4. **What records do I need to keep?** A number of different records will help you document your compliance with waste rules. The waste generator status of your shop determines the types of reports you must send to the TCEQ or that you must maintain on site. Some of these reports are required once a year, but others are required whenever a waste is picked up from your auto body shop. When you're ready to learn the details of record keeping, see "What Records Do I Need to Keep?" later in this chapter.
5. **How do I store my waste properly?** You can't avoid storing your auto body shop wastes for at least a few days before a disposal service picks them up. In the meantime, you need to make sure that one waste doesn't contaminate another—and that none of your wastes contaminate the environment. See "How Do I Store My Wastes Properly?" later in this chapter to learn more about the storage options available to you.
6. **How can I be sure my waste is transported and disposed of correctly?** Finding the right way to dispose of wastes from your auto body shop will not only help you comply with state and federal rules but also give you peace of mind. Under federal law, you remain responsible for your waste even after you have disposed of it. To find out how to best manage this responsibility, see "How Can I Be Sure My Waste is Transported and Disposed of Properly?" later in this chapter.



# What Wastes Do I Generate?

To know what wastes you generate and to manage them properly, you need to have enough information about them to:

- Know the process that generated the waste.
- Tell whether each waste is hazardous or nonhazardous.
- Decide on the best disposal or recycling option for the waste based on its composition and characteristics.

## Identify Each Waste

Look around your auto body shop. What do you throw away—or pile up and hope you will find a use for some day? What is left over when a material is used up? What has gone bad before it could be used? Each of these items could be a waste.

Individual wastes can be solids, liquids, or containerized gases. Table 5 shows a few examples of some common wastes that you might see around your auto body shop.

After you have identified the wastes generated at your auto body shop, you should group them into common “waste streams.” Wastes belong to a common waste stream if they:

- are produced by similar processes,
- have similar characteristics, and
- can be stored, treated, and disposed of in the same way.



If different wastes share **all** of the above features, you can group them into one “waste stream.” For example, in Table 5, the wastes from the office and the customer waiting room can be grouped into one waste stream because they all:

- are produced by everyday activities,
- are similar in composition, and
- offer no particular challenges in terms of storage and disposal.

In fact, most auto body shops group these wastes into one stream: garbage. Any waste that does not fit together with other wastes in this way is its own waste stream.

## Identify and Classify Each Hazardous Waste

Once you have identified all of the different wastes that your auto body shop generates, you must then determine which of these are hazardous and which

**Table 5. Wastes You Might Find at Your Auto Body Shop**

Where You Should Look	Waste You May Find
Office area	Junk mail, old work orders, stale doughnuts, ashtray wastes
Customer waiting room (or employee break area)	Food wrappers, disposable coffee cups, food and drink wastes, old newspapers and magazines, used paper towels
Vehicle prep area	Oil-absorbing material (cat litter) from spill cleanup, waste compound, tape and paper, antifreeze or other automotive fluids, parts from vehicles
Painting and finishing area	Empty paint cans, used paint and paint thinner, used filters from the paint booth, paint gun cleaner solvent, solvent from the parts washer, tape and paper, respirator filters, PPE
Storage room	Half-empty cans of paint, out-of-date chemicals
Area behind the shop	Empty 55-gallon drums, scrap metal parts, old tires, containers of used oil and used oil filters

are not. This is called making a “hazardous waste determination.” As shown in Figure 1, waste can be categorized in several ways, depending on its source and the risk it poses.

## How Can I Tell That a Waste Is Hazardous?

According to EPA rules (40 CFR, Section 261.3), there are only two ways that a waste can be designated as hazardous:

- It can be listed as hazardous in the EPA rules.
- It can have hazardous characteristics.

Determining whether a waste fits one or both of these criteria does not have to be confusing or costly. You can use these acceptable methods:

- **Use process knowledge—that is, what you know about the waste.** Use the material safety data sheet (MSDS) and label of each product you use to determine what is in your waste and what its physical and chemical characteristics are. You can then compare this information with the EPA-listed hazardous wastes and characteristics of hazardous wastes.
- **Arrange for testing.** If you suspect that your waste has a hazardous characteristic, you can arrange for a lab to analyze it. Depending on the types of waste you provide, the lab might run a toxicity characteristic leaching procedure (TCLP), determine the flash point of the waste, measure its pH, or run other tests for hazardous characteristics.

## Use both process knowledge and testing.

You will most likely use a combination of the previous two methods. For example, if you reviewed an MSDS for paint and noticed that it contained lead as an ingredient, this would serve as a good indicator that you should test the waste to determine its lead content.

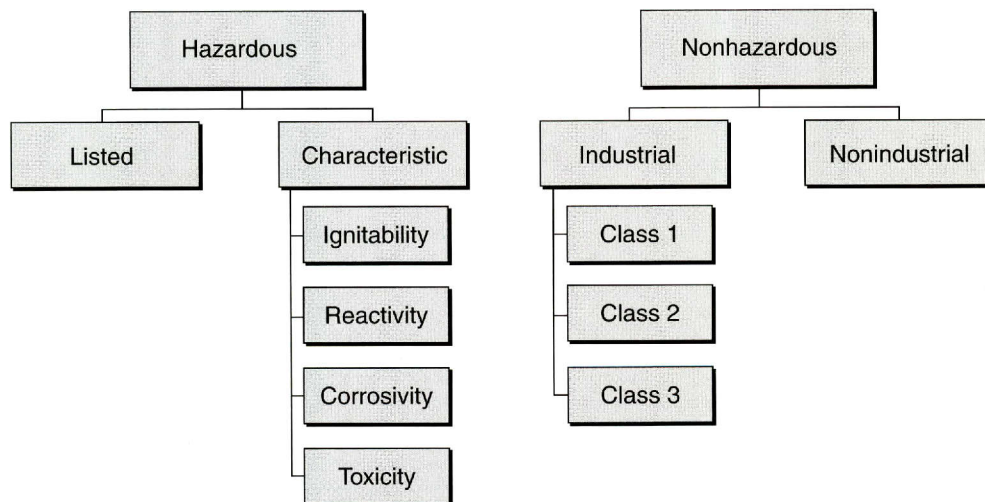
## How Can I Use the EPA Lists?

The EPA has developed four lists of the more frequently occurring hazardous wastes. These lists are found in 40 CFR, Part 261, Subpart D, and are designated by the letters P, U, K, and F:

**For unused products that become waste: the “P” and “U” lists.** These lists are used to categorize unused products only—for example, a half-used container of new degreasing solvent that you’ve decided not to use anymore. Another example is any unused product that becomes a waste when you have to dispose of it after cleaning up a storeroom or reducing inventory. Remember, for a waste to be “P” or “U” listed, it must be unused and in pure form.

- **“P” List.** If a waste is on this list, then it is considered especially harmful, even in small quantities. These wastes are referred to as “acutely hazardous waste.” Auto body shops rarely generate the acutely hazardous wastes found on this list.
- **“U” List.** This group of hazardous wastes includes common chemical products. Your auto body shop may occasionally generate U-listed waste when you need to dispose of unused, off-spec, or expired chemicals.

Figure 1. Hazardous and Nonhazardous Wastes



If you spill an unused chemical product that is found on the “P” or “U” list, the residue from the spill cleanup would be regulated as a hazardous waste with the corresponding “P” or “U” listing.

#### For “used” products that become waste: the “K” and “F” lists.

- **“K” List.** These wastes are very industry specific. On this list, EPA identified hazardous wastes generated by specific industries, such as pesticide manufacturers. Auto body shops do not normally generate “K”-listed waste.
- **“F” List.** This list includes wastes from all types of businesses and processes. For example, you may clean parts using solvents that appear on the “F” List. Be sure to check this list closely for any waste that your auto body shop generates.

### How Do I Know if My Waste Has a Hazardous Characteristic?

Each waste on the EPA lists is hazardous because it has at least one of four key characteristics—ignitability, corrosivity, reactivity, or toxicity. But any other waste is also hazardous if testing shows that it has one or more of these characteristics:

**Ignitability.** A waste that catches fire easily is hazardous. To determine whether one of your wastes is ignitable enough to be hazardous, an analytical lab would measure the flash point of the waste. If the flash point is less than 140 degrees F, the waste is considered to be ignitable to the point of being hazardous. For example, many solvents and thinners are ignitable.

**Corrosivity.** Any liquid waste is hazardous because of its corrosivity if it has *even one* of these characteristics:

- has a pH of 2 or less (is very acidic)
- has a pH of 12.5 or greater (is a very strong base)
- corrodes steel at a certain specified rate

For example, some chemicals used to etch parts may be hazardous because of corrosivity.

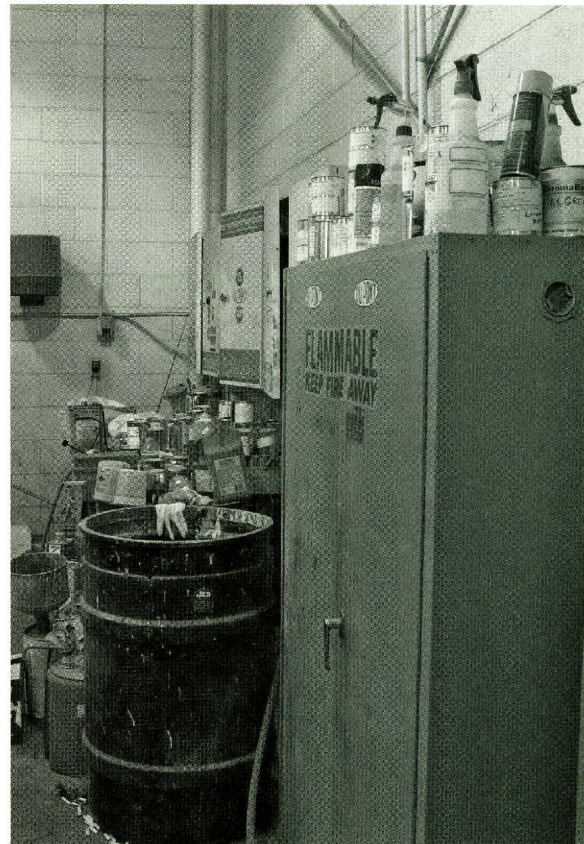
**Reactivity.** A waste is hazardous because of its reactivity if it has *even one* of these characteristics:

- is unstable (for example, sensitive to shock)
- undergoes a rapid and violent chemical reaction with water

- releases certain toxic gases when exposed to acid
- releases certain toxic gases when exposed to base

For example, different peroxides used as hardening agents or catalysts in body filler and two-part epoxies are hazardous because of their reactivity—may cause fire, explosion, or other violent reaction if exposed to certain acids or flammable liquids such as solvents. If your process knowledge does not tell you whether one of your wastes is hazardous because of its reactivity, an analytical lab can.

**Toxicity.** Any waste that contains at least one of the toxic substances listed in Table 6 might be hazardous because of its toxicity. The key is not the amount of the toxic substance in the waste—the key is whether the toxic substance leaches out of the waste at or above a threshold concentration stated in EPA rules. An analytical laboratory can run a test known as the Toxicity Characteristic Leaching Procedure, or TCLP, to determine whether a particular waste is hazardous because of its toxicity. For example, waste paint that contains lead at or above 5 ppm is considered to be hazardous for the toxicity characteristic of lead.



**Table 6. Substances That Call for a TCLP if Found in Waste Generated at Your Auto Body Shop**

HW No.	Contaminant	Maximum concentration (mg/L)
D004	Arsenic	5
D005	Barium	100
D018	Benzene	0.5
D006	Cadmium	1
D019	Carbon tetrachloride	0.5
D020	Chlordane	0.03
D021	Chlorobenzene	100
D022	Chloroform	6
D007	Chromium	5
D023	o-Cresol	200*
D024	m-Cresol	200*
D025	p-Cresol	200*
D026	Cresol	200*
D016	2,4-D	10
D027	1,4-Dichloroethane	7.5
D028	1,2-Dichloroethane	0.5
D029	1,1-Dichloroethylene	0.7
D030	2,4-Dinitrotoluene	0.13**
D012	Endrin	0.02
D031	Heptachlor (and its epoxide)	0.008
D033	Hexachlorbutadiene	0.5
D034	Hexachloroethane	3
D008	Lead	5
D013	Lindane	0.4
D009	Mercury	0.2
D014	Methoxychlor	10
D035	Methyl ethyl ketone	200
D036	Nitrobenzene	2
D037	Pentachlorophenol	100
D038	Pyridine	5**
D010	Selenium	1
D011	Silver	5
D039	Tetrachloroethylene	0.7
D015	Toxaphene	0.5
D040	Trichloroethylene	0.5
D041	2,4,5-Trichlorophenol	400
D042	2,4,6-Trichlorophenol	2
D017	2,4,5-TP (Silvex)	1
D043	Vinyl chloride	0.2

**Note:** Wastes that leach a listed contaminant at or above the threshold levels listed in this table are considered hazardous.

\* If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level for total cresol is 200 mg/L.

\*\* If the quantitation limit is greater than the calculated regulatory level it becomes the regulatory level.

Of course, if process knowledge proves to you that a waste has one or more of these characteristics, you may classify it as characteristically hazardous without having a lab test done. Table 7 lists common wastes generated at auto body shops that may be considered characteristically hazardous.

### Wait—Is It “Universal Waste”?

Some hazardous wastes are referred to as “universal waste” because they are commonly generated by many different types of businesses. You may choose to classify one or more waste streams produced by your auto body shop as universal waste if it fits into any one of these categories:

- **Paint and paint-related waste.** This category includes used thinner, waste paint, surface-preparation wastes, and other hazardous wastes that are generated from painting activities *within the state of Texas*. This category of universal waste does not exist in other states. For more information, read TCEQ publication RG-370, *Managing Paint and Paint-Related Waste under the Universal Waste Rule*.
- **Hazardous lamps.** Fluorescent tubes are the most common example of this category of universal waste. Some fluorescent lamps contain mercury at levels above the hazardous threshold. If your business generates hazardous lamps that you think could be designated as universal waste, read TCEQ publication RG-377, *Universal Waste Regulations for Hazardous Lamps in Texas*.
- **Mercury-containing thermostats.** Only devices that actually control temperature and contain liquid mercury in an ampule are in this category. Other devices that contain mercury switches or gauges are not universal waste.
- **Pesticides—sometimes.** Only pesticides that have been recalled by the manufacturer or collected at a waste pesticide collection event may be classified as universal waste.
- **Batteries—sometimes.** Batteries—all sizes and types of hazardous waste batteries that are not managed under 40 Code of Federal Regulations, Part 266, Subpart G, may be managed as universal waste.

## Why Consider Calling It “Universal Waste”?

Universal waste is still hazardous waste—in other words, you must store it properly, and you can’t throw it out with your normal trash. But classifying your eligible waste streams as universal waste offers these benefits:

**A longer accumulation time.** If you have to, you may accumulate a universal waste at your auto body shop for as long as one year before disposing of it. Fewer trips to dispose of the waste—whether by you or by a transporter—add up to lower disposal costs.

**Less paperwork.** You do not have to:

- count universal waste toward your hazardous waste generator status
- include universal waste in your annual waste summary (not everybody must file an annual waste summary; to find out if you must, see “What is My Generator Status?” later in this chapter)
- use a Uniform Hazardous Waste Manifest when shipping universal waste (see “Waste Shipment and Disposal Documentation,” under “What Records Do I Need to Keep,” later in this chapter, to see how much time this option can save you)

**Flexible transportation requirements.** Universal waste may be transported by a common carrier.

## Classify and Manage Your Nonhazardous Wastes

Once all hazardous waste streams have been identified and properly classified, you should focus on what is left—nonhazardous waste. Auto body shops are generally considered to be “municipal” generators. In other words, for the purposes of waste classification, they are grouped with businesses that offer a service or repair work. Because auto body shops are municipal

waste generators, you do not need any specific classifications for your nonhazardous waste. But, there may be waste management standards or additional requirements for the disposal facility or recycler.

## How Do I Manage My Nonhazardous Waste?

Auto body shops generate a large number of nonhazardous waste. Although nonhazardous, many of these wastes still have specific handling, transportation, and disposal requirements.

**Used Oil.** If your auto body shop generates used oil, you must ensure that it is managed properly by following the bullet points below:

- Register with the TCEQ if you collect used oil from other shops or the general public.
- All storage containers should be marked “Used Oil.”
- Never mix hazardous waste with your used oil.
- Always use a registered transporter unless you are transporting your own used oil. If you decide to transport your own used oil, you may transport up to 55 gallons at a time without having to register.
- Never put used oil in the trash—always use an approved disposal facility.

For more on used oil, see the TCEQ guidance document RG-325, *Used Oil Recycling: Guidance for Used Oil Handlers*.

**Used Oil Filters.** If your auto body shop generates used oil filters from customer cars, you must manage them according to the following bullet points:

- Register with the TCEQ if you collect used oil filters from other shops or the general public.
- Always completely drain your used oil filters before disposal.
- Never store more than six 55-gallon drums of filters at a time.

**Table 7. Auto Body Shop Wastes That Might Be Characteristically Hazardous**

These wastes:	Might be characteristically hazardous...
Cat litter from spill cleanup	If the substance that was spilled and cleaned up would normally be classified as ignitable or toxic.
Waste paint	If testing shows that the paint contains toxic substances (such as heavy metals) that would leach out in a landfill.
Unused, out-of-date chemicals	If the chemicals are ignitable, toxic, or corrosive.
Used solvents	If the solvent is ignitable, toxic, or corrosive.

- Label your containers with the words “Used Oil Filters” and keep them closed.
- Always use a registered transporter, unless you choose to transport your own used oil filters (up to two 55-gallon drums at a time).
- Always use a bill of lading when shipping your used oil filters.
- Never put used oil filters in the trash—always use an approved disposal facility.

For more on used oil filters, see 30 TAC, Chapter 328.

**Used Tires.** If you remove used tires from collision-damaged vehicles, be sure to manage them properly by following the points below:

- Monitor tires stored outside for infestation at least once every two weeks.
- Stack, sort, classify, and arrange good used tires in an organized manner for sale.
- Never store more than 500 tires on the ground or 2,000 in an enclosed area or trailer—don’t be a nuisance.
- Document the removal of all scrap tires using manifests, work orders, invoices, or other records. This applies even if you transport your own used tires.
- Allow only registered scrap tire transporters to remove your scrap tires.
- Ensure that the transporter who collects the tires delivers them to an authorized facility.
- For more on managing used tires, see 30 TAC, Chapter 328, Subchapter F.

**Empty Containers.** Auto body shops may generate a large number of empty containers such as paint and thinner cans. Empty paint and thinner cans, less than 55 gallons in volume, can be placed in the trash if you take the following steps:

- Empty the containers completely—they must have less than one inch of residue remaining in the bottom—this is called “RCRA” empty. For more information on what constitutes an RCRA empty container, see 30 TAC 335.41.
- Completely use up all contents of aerosol cans—they must have no pressure left inside.
- Check with your garbage hauler to ensure that they will accept your paint cans once they arrive at the landfill.

**Paint Booth Filters.** Most paint booth filters can be placed in the garbage so long as:

- They are dry—wet filters may be ignitable
- They were not used with paints containing heavy metals—overspray from paints with

heavy metals such as lead, cadmium, or chromium can make your paint booth filters hazardous

For more information about the disposal of paint booth filters see Appendix F.

**Spill Cleanup Residue (Cat Litter).** You should limit your use of spill cleanup materials by carefully monitoring their use and doing your best to avoid spills. When spills do occur, consider the following points in deciding how to dispose of the spill residue:

- Spill cleanup materials normally take on the characteristics of what they were used to clean up.
- Spill material resulting from the cleanup of a hazardous waste will more than likely be hazardous, too. If this is the case, you must manage it as a hazardous waste.
- Spill materials with free-flowing used oil can be disposed of with your shop’s other used oil.
- If you determine that your spill material is nonhazardous, you can place it in your garbage as long as it is dry.

At this point, your list of wastes will probably look a lot like Table 8. For more information on how to classify hazardous waste, read TCEQ publication RG-022, *Guidelines for the Classification and Coding of Industrial and Hazardous Waste*.

## What Is My Generator Status?

Once you have properly classified all of your waste, the next step is to determine the generator status of your auto body shop. This status is based on the amount of **hazardous** waste—not including universal waste—that your business generates monthly. There are three possible categories:

- a conditionally exempt small-quantity generator (CESQG)
- a small-quantity generator (SQG)
- a large-quantity generator (LQG)

### Conditionally Exempt Small-Quantity Generator (CESQG)

Your auto body shop qualifies as a CESQG if both of these statements are true:

- It never generates more than 220 lbs per month (100 kg, or about half a 55-gallon drum of liquid) of hazardous waste.

- If it generates any “P” listed acutely hazardous waste at all, it is never as much as 2.2 lbs per month (1 kg, or less than a quart).

As a CESQG, your auto body shop would be exempt from most hazardous waste management

regulations, but you must comply with these four basic requirements:

- Always identify and classify all of your waste.
- Never keep more than 2,200 lbs (1,000 kg, or approximately five 55-gallon drums of

**Table 8. Wastes Commonly Generated at Auto Body Shops**

Areas where you looked...	Waste that you found...	Then the waste...
Office area	Junk mail and old work orders	Is probably harmless and can be disposed of in the garbage.
Prep area	Cat litter from spill cleanup	May be characteristically hazardous.
	Waste compound (dry)	May be characteristically hazardous.
	Tape and paper with paint	May be characteristically hazardous. If hazardous, consider universal waste designation.
	Antifreeze	May be characteristically hazardous. Always send for recycling.
Painting and finishing area	RCRA empty paint cans (with minimal residue) <sup>1</sup>	Are not likely to be a hazardous waste—make sure they meet the definition of RCRA empty.
	Used paint	May be characteristically hazardous. If hazardous, consider universal waste designation.
	Used paint thinner	May be characteristically hazardous or “F” listed. Consider universal waste designation.
	Used paint booth filters (dry)	May be characteristically hazardous. If hazardous, consider universal waste designation.
	Used paint gun cleaner solvent	May be characteristically hazardous or “F” listed. If hazardous, consider universal waste designation.
	Used parts-washer solvent	May be characteristically hazardous or “F” listed.
Storage room	Half-empty cans of unused paint	May be characteristically hazardous. If hazardous, consider universal waste designation.
	Unused, out-of-date chemicals	May be “U” listed or characteristically hazardous waste.
	Unused, out-of-date pesticides	May be “P” listed or characteristically hazardous waste.
Area behind the shop	RCRA empty 55-gallon drums	Are not likely to be a hazardous waste—make sure they meet the definition of “RCRA empty.”
	Scrap metal parts	Are not considered a waste if sent for recycling.
	Scrap plastic “skins” from bumpers and fenders	Are not hazardous—recycle or dispose of in regular trash.
	Old tires	Are not hazardous—dispose of used tires properly.
	Containers of used oil	Are not likely to be a hazardous waste if recycled—don’t mix other waste with used oil.
	Containers of used oil filters	Are not likely to be a hazardous waste. Send for recycling.

<sup>1</sup>For more information on what constitutes an RCRA empty container, see 30 TAC 335.41.

liquid) of hazardous waste on your property at any time.

- Always send waste to a permitted or approved disposal facility.
- Always keep complete records (MSDSs, waste determinations, shipping records, and quantities of hazardous waste generated each month) to prove you are a CESQG.

## Small-Quantity Generator (SQG)

Small-quantity generators produce more than 220 lbs but less than 2,200 lbs per month (100 to 1,000 kg, or half of a 55-gallon drum to five 55-gallon drums of liquid) of hazardous waste **and** less than 2.2 lbs per month (1 kg, or 1 quart) of acutely hazardous waste. Do not count universal waste in this monthly total. As a general rule, all auto body shops that are SQGs must:

- Perform a waste determination on all waste streams generated and keep records to support the classification assigned to each waste stream.
- Document the amount of hazardous and acutely hazardous waste generated on a monthly basis.



- Obtain a Texas solid waste registration number and an EPA identification number—submit form TCEQ-0002.
- Never keep hazardous waste on site for more than 180 days. (**Exception:** This time limit is 270 days if you are shipping waste over 200 miles.)
- Never accumulate more than 13,200 lbs (6,000 kg or approximately 30 drums of liquid) of hazardous waste.
- Manifest all hazardous waste and all Class 1 waste except Class 1 waste that is recycled—and **always** use a registered transporter.
- Make sure that all waste is disposed of or recycled at a permitted or approved facility.
- Comply with all applicable TCEQ and EPA record keeping and reporting requirements. For more on these requirements, see Table 10, “Common Forms Used for Waste Record Keeping and Reporting,” later in this chapter.

## Large-Quantity Generator (LQG)

Large-quantity generators generate more than 2,200 lbs per month (more than 1,000 kg or about five 55-gallon drums of liquid waste) of hazardous waste **and/or** generate more than 2.2 lbs per month (more than 1 kg or 1 quart) of acutely hazardous waste.

- Perform a hazardous waste determination on all waste streams generated and keep records to support the classification assigned to each waste stream.
- Obtain a Texas solid waste registration number and an EPA identification number—submit form TCEQ-0002.
- Never keep hazardous waste on site for more than 90 days.
- Ensure that all employees are properly trained and the facility has an adequate contingency plan for dealing with emergencies.
- Manifest all hazardous waste and all Class 1 waste except Class 1 waste that is recycled—and **always** use a registered transporter.
- Ensure that all waste is disposed of or recycled at a permitted or approved facility.
- Comply with all applicable TCEQ and EPA record keeping and reporting requirements. For more on these requirements, see Table 10, “Common Forms Used for Waste Record Keeping and Reporting,” later in this chapter.



## “Episodic” Generator

If your auto body shop generates different amounts of hazardous waste from month to month, you may be considered an “episodic generator.” This means that the hazardous waste rules that apply to your facility could change on a monthly basis, depending on your generator status for that month.

For example, if you generated only 100 pounds of hazardous waste in one month, you would be considered a CESQG. Waste generated during that month would be subject to only the CESQG standards. If, however, you generated 300 pounds the next month, you would be considered to be an SQG for that month—and waste generated during that month would be subject to all of the SQG standards.

To avoid this confusion, try to minimize monthly fluctuations in the amount of hazardous waste you generate. If that isn’t possible, it is probably best to register your auto body shop under the more stringent generator status—in the above example, as an SQG.

## Do I Need to Register as a Generator?

Now that you are sure that you have worked out the best way to manage your wastes, you have the information you need to register with the TCEQ and, if necessary, the EPA—or to prove that you are exempt from registering.

All SQGs and LQGs must register with the TCEQ (TCEQ-0002) and the EPA (8700-12). You will use these forms to list detailed waste-related information about your auto body shop. Both forms should be sent to the TCEQ when completed.

When the TCEQ receives the completed form, your auto body shop will be issued two numbers—one from the TCEQ (a 5-digit “Solid Waste Registration Number”) and one from the EPA (a 12-digit “EPA ID Number”). Use these numbers any time you:

- ship waste using a Uniform Hazardous Waste Manifest
- correspond with the TCEQ
- correspond with the EPA

**Table 9. Common Waste Registration Forms**

Form Name	Form Number	Description	Needed by...		
			CESQGs	SQGs	LQGs
Core Data Form	TCEQ-10400	Provides basic information about a site such as owner name, locations, etc.	No	Yes	Yes
Notification of Regulated Waste Activity	EPA-8700-12	To register with the EPA as a hazardous waste generator. This form is included as part of the TCEQ-00002 package.	No	Yes	Yes
Initial Notification Package	TCEQ-00002	To register with the TCEQ as a hazardous waste generator. This form is also used to notify the TCEQ of your facility’s waste streams and WMUs.	No	Yes	Yes
Notice of Registration (NOR)	None	The TCEQ will produce your “NOR” and send it to your auto body shop after you have submitted TCEQ-00002. Your NOR will list detailed waste information about your facility. Be sure to notify the TCEQ promptly whenever information shown on your NOR changes. It is your responsibility to keep your NOR up-to-date.	No	Yes	Yes
Generator Notification Form for Recycling Hazardous or Industrial Waste	TCEQ-00525	To notify TCEQ any time a waste is sent away from your auto body shop for recycling.	No	Yes	Yes

You may be required to submit additional forms at the time you register. To determine whether these additional forms apply to you, see Table 9.

## What Records Do I Need to Keep?

The types of records you are required to maintain, are based on your generator status and other activities at your auto body shop. See Table 10, “Common Forms Used for Waste Record Keeping and Reporting,” later in this chapter, for a detailed description of waste-related forms that you may be required to submit or maintain.

### Waste Stream Documentation

You must document how you arrived at your waste determination. You need to do a determination only once for each waste stream generated at your auto body shop, unless that waste stream changes. For each waste stream at your auto body shop, TCEQ investigators may ask to see the following:

- Description of the waste stream and the process that generated it.

- The date the waste stream was first generated at your auto body shop.
- Waste classification documentation for all hazardous wastes. Be sure to include any analytical data or other information you used to make your determination.

### Waste Shipment and Disposal Documentation: EPA Uniform Hazardous Waste Manifest

If you are an SQG or LQG, you must use an EPA Uniform Hazardous Waste Manifest (form TCEQ-0311) every time you send hazardous waste or Class 1 waste for disposal. This form documents the proper shipment and disposal of the waste, and produces six copies:

- **Generator Copy.** Keep this copy after both you and the transporter have signed the form. On this copy, you should be able to clearly read the two signatures (in other words, the signatures should not be too faint to see). Keep it until you receive the “Original—Return to Generator” copy. Give the remaining five copies to the transporter.

**Table 10. Common Forms Used for Waste Record Keeping and Reporting**

Form Name	Form Number	Description	Needed by...		
			CESQGs	SQGs	LQGs
Waste Stream Profile Documentation	None	There is no standard form for this. Made up of your auto body shop's documentation of waste determination. Contact SBLGA for a sample form.	Yes	Yes	Yes
WMU Inspections Form	None	No standardized form. Auto body shops must keep records of WMU inspections. Contact the SBLGA program for a sample form.	No	Yes	Yes
EPA Uniform Hazardous Waste Manifest	TCEQ-0311	Used any time a hazardous or Class 1 waste is sent away for disposal.	No	Yes	Yes
Land Ban Documentation “LDR”	None	To notify the disposal facility as to the land ban status of the waste.	No	Yes	Yes
Exception Report	None (letter from the generator is acceptable)	To notify the TCEQ if original manifests are not received back from the disposal facility within 35 days of original shipment.	No	Yes	Yes
Annual Waste Summary	TCEQ-0436	To notify the TCEQ of the amount of hazardous and Class 1 waste generated at your facility each year.	No	Yes	Yes

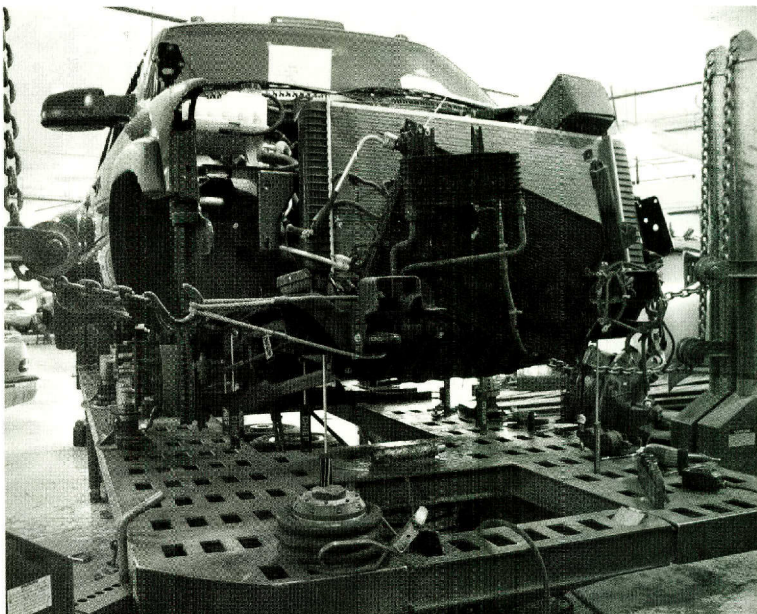
■ **Transporter No. 1 & Transporter**

**No. 2 Copies.** On delivering the waste to the disposal facility, the transporter gets the facility's representative to sign the form. The transporter keeps this copy, which should show copies of all three signatures (yours, the transporter's, and the disposal facility representative's). The transporter gives the remaining three copies to the disposal facility representative.

■ **TSDF Copy.** As with the Generator copy, the TSDF (Treatment Storage and Disposal Facility) copy should clearly show copies of all three signatures. The disposal facility keeps this copy for its records.

■ **Original—Return to Generator Copy.** This is the top copy, or original, of the form. The Return to Generator copy should bear all original signatures (yours, the transporter's, and the disposal facility representative's). The disposal facility is to mail this copy to you. When you get the Return to Generator copy, compare it to the Generator copy to be sure no important information was changed. Keep the Return to Generator copy for your permanent records.

■ **File Copy or State Copy.** This is a copy provided for states that require copies of the manifest.



If your auto body shop is a small-quantity generator (SQG) or a large-quantity generator (LQG), you must follow these waste storage requirements:

- Keep waste safe from tampering or vandalism.
- Keep waste separate from substances that will react with it.
- Store waste in tanks and containers that are in good condition.
- Label waste with the required information.
- Do not store waste beyond accumulation time limits.

Having said that, there are two basic options for storing wastes at your auto body shop: a waste management unit or a waste management unit with satellite accumulation areas.

## How Do I Store My Wastes Properly?

It's unavoidable—you will have to store at least some wastes at your auto body shop until they are picked up (or shipped away) for disposal or recycling. The rules that apply to how you must store your waste depend upon your generator status.

If your auto body shop is a conditionally exempt small-quantity generator (CESQG) or exempt from registering, the items listed below are **guidelines** for handling your waste responsibly. You don't have to follow them, but doing so can help you keep your auto body shop cleaner and safer.

### Option 1: Waste Management Units (WMUs)

You may use a waste management unit to collect your hazardous waste. A WMU is simply an area that you set aside at your auto body shop to collect a specific waste.

To maintain a WMU properly, follow these rules:

- Label each tank or container containing hazardous waste with the words "Hazardous Waste."
- Label each tank or container containing hazardous waste with the date that waste was first added to it, not the date that the container became full.

- Inspect tanks daily, and containers weekly, for leaks, corrosion, and bulging. Keep records of these inspections.
- Keep containers closed except when filling or emptying them.
- Never store different wastes in the same container, if those wastes could react with one another.
- Ensure that storage containers are compatible with their contents.
- If your auto body shop is an LQG, you must keep all corrosive and ignitable waste at least 50 feet from the property line.
- Make sure that all WMUs appear on your Notice of Registration (NOR).

The amount of time that hazardous waste can remain in your WMU is limited. The specific time limit depends upon the generator status of your auto body shop, as shown in Table 11.

## Option 2: WMUs Plus Satellite Accumulation Areas

Unlike a WMU, a satellite accumulation area is a small, distinct area near the place where a specific hazardous waste is generated at your auto body shop. The idea is that you put this waste in a container at this location and then, when the container is full, move it to the corresponding WMU. So you would use one or more satellite accumulation areas along with, not instead of, a WMU.

To properly manage satellite accumulation areas at your auto body shop, you must:

- Ensure that all satellite accumulation areas are **at** or **near** the point where the waste they store is generated. Satellite accumulation areas should also be under the control of a staff person at all times.
- Never store more than 55 gallons of a hazardous waste or one quart of acutely hazardous waste at a satellite accumulation area.
- Label the satellite accumulation container with the words “Hazardous Waste” or with words that accurately identify the container’s contents.
- Mark the date on the satellite accumulation container once it becomes full. Within three days of this date, you must move the container to one of your facility’s waste management units.
- Clearly mark or otherwise identify your satellite accumulation areas. This can be done with a sign, a label, or even a list of their locations that you keep on file. This will ensure that they are not confused with WMUs.

Using satellite accumulation areas offers several advantages to you—for example:

- It’s a convenient and cost-effective way to collect wastes that are generated by a specific process in only small amounts but over a long period of time.

**Table 11. Hazardous Waste Generator Categories**

Generator Status	How much hazardous waste you can generate per month	How much acutely hazardous waste you can generate per month	How much hazardous waste you can collect in a waste management unit <sup>1</sup>	Length of time you can store it in a waste management unit from the time accumulation begins <sup>2</sup>
CESQG	up to 220 lbs. (about half a 55-gallon drum of liquid)	up to 2.2 lbs. (about 1 quart)	up to 2,200 lbs. (about five 55-gallon drums of liquid)	no time limit
SQG	220 to 2,200 lbs.	up to 2.2 lbs.	up to 13,200 lbs. (about 30 55-gallon drums of liquid)	180 days <sup>3</sup>
LQG	over 2,200 lbs.	over 2.2 lbs.	any amount	90 days

<sup>1</sup> A waste management unit is an area in your facility where you collect, treat, or store the waste that you generate. It may be a storage shed, a room, an area within a berm, a solvent distillation unit, etc.

<sup>2</sup> Accumulation begins when the storage container is placed in the waste management unit. Containers must be labeled “hazardous” and dated.

<sup>3</sup> The limit is 270 days if the treatment, storage, and disposal facility (TSDF) is more than 200 miles away.

- Because the satellite accumulation area is close to the place where the waste is generated, you and your employees will not go far to store these small amounts of waste.
- Each trip to the WMU increases the chance that a waste could be spilled on the way, so fewer trips means fewer spills.
- When you collect a hazardous waste in a satellite accumulation area, the clock doesn't start on the time limits shown in Table 11 until the container is full.

## How Can I Be Sure My Waste Is Transported and Disposed of Correctly?

How you dispose of your waste is just as important as properly managing it at your auto body shop. If your waste is disposed of improperly, you could be held responsible for the cleanup costs. (In “What Records Do I Need to Keep?,” earlier in this chapter, you can read about the EPA Uniform Hazardous Waste Manifest and how you can use it to document the proper shipment and disposal of hazardous wastes from your auto body shop.)

There are a few key points to know about proper waste transport and disposal:

- Always use a transporter that is registered to haul your specific type of waste.
- Always ensure that you are sending your waste to a disposal facility that is permitted or approved to accept it.
- Closely follow your waste through the transportation and disposal process. Always make sure you use and retain the appropriate paperwork.

### 1. Find a Qualified Transporter

When choosing a waste transporter for your auto body shop, make sure that the transporter has the proper authorization. The type of authorization a transporter must have depends upon the classification of waste that they transport:

- **Hazardous waste transporters.** Companies that transport hazardous waste must be registered and be in good standing with **both** the TCEQ and the EPA.

- **Universal waste transporters.** Companies that transport universal waste are not required to be registered with the TCEQ or the EPA. In other words, they may be common carriers.
- **Nonhazardous waste (garbage) transporters.** Companies that pick up your nonhazardous garbage are also not required to be permitted with the TCEQ or the EPA.

### 2. Know the Disposal Facility

Before you reach the point where you have to send your waste away for disposal, you should carefully research the disposal facility you will be using. Make sure they have the permit or authorization required to receive the specific type of waste you will be sending them:

- **Hazardous waste disposal facilities.** All hazardous waste must be disposed of at facilities permitted by both the TCEQ and EPA.
- **Universal waste disposal facilities.** All facilities accepting universal waste for disposal must be permitted as a hazardous waste disposal facility by both the TCEQ and the EPA. Some universal waste may be transported to other types of facilities for temporary storage. These facilities are called “universal waste handlers.” Only “large quantity handlers” are required to be registered with the EPA.
- **Nonhazardous waste (garbage) disposal facilities.** All facilities accepting garbage for disposal must be permitted by both the TCEQ and the EPA.

## Common Waste Violations for Auto Body Shops

Investigations by the TCEQ show that the six most common waste violations are:

- Failing to perform a hazardous waste determination—all wastes must be evaluated to see if they are hazardous or not.
- Failing to document waste determination—be sure to always keep records of your decision-making process and of your lab results.

- Failing to properly label drums storing hazardous waste—remember to always mark drums with the words “Hazardous Waste” and the date that you first added hazardous waste to the container.
- Failing to keep drums closed—drums must be kept closed at all times except when adding or removing waste.
- Failing to properly complete or use a Uniform Hazardous Waste Manifest—all hazardous waste shipments must be accompanied by a manifest. Remember to always maintain your copies for at least three years.
- Failing to use registered haulers for tires, used oil, and used oil filters.



## ***Chapter 3***

# **Protecting the Water**

### **In this chapter . . .**

**What Do I Need to Know About Domestic Wastewater?** ..... 26

**What Do I Need to Know About Industrial Wastewater?** ..... 26

If Your Industrial Wastewater Is Hazardous ... ..... 26

If Your Industrial Wastewater Is Nonhazardous ... ..... 27

**Common Water Violations for Auto Body Shops** ..... 27

# Protecting the Water

**T**he quality of life we enjoy in this country today depends largely on having ample supplies of clean water. By complying with state water quality rules at your auto body shop, you help ensure that our water supplies remain clean.

Any auto body shop generates two categories of wastewater:

- domestic wastewater (also called sewage)
- industrial wastewater

It is important to remember that although these are both wastewater, they are regulated differently. As a result, the treatment requirements, disposal methods, and permitting options may be different.

## What Do I Need to Know About Domestic Wastewater?

“Domestic wastewater” is the term used for what most of us would call sewage—in other words, wastewater from kitchens, bathrooms, laundry, and other non-industrial sources.

You may dispose of domestic wastewater from your auto body shop in one of two ways:

- By hooking up to a wastewater collection system, which sends the wastewater to a treatment plant for management and disposal. These facilities are often referred to as POTWs, or Publicly Owned Treatment Works.
- By using a septic system, also known as an “on-site sewage facility” (OSSF).

Auto body shops may use a septic system only for domestic wastewater disposal, and only for up to 5,000 gallons of waste per day. Do not use a septic system for industrial wastewater.

All septic systems must be built and installed according to TCEQ-approved standards. For more

information about these standards, call TCEQ’s Installer Certification section at 512/239-0914.

## What Do I Need to Know About Industrial Wastewater?

“Industrial wastewater” is any water left over from a process at your auto body shop or that is contaminated with solvents, detergents, metal shavings, or other pollutants. For example, your auto body shop generates industrial wastewater when water is used in these ways:

- to wash down or mop floors in work areas
- for washing vehicles
- for cleaning equipment

To find out how you can dispose of your auto body shop’s industrial wastewater, you must first determine whether it is a hazardous waste. See “How Can I Tell That a Waste Is Hazardous” in Chapter 2 for information about doing a hazardous waste determination.

## If Your Industrial Wastewater Is Hazardous...

If the wastewater from a particular process at your auto body shop is hazardous, keep it separate from other industrial wastewater that is nonhazardous. With approval from your local wastewater treatment facility, you may be able to dispose of this industrial wastewater in the sewer system. If this is not an option for you, dispose of this hazardous wastewater in the same manner you would other hazardous waste. See “How Can I Be Sure My Waste Is Transported and Disposed of Correctly?” toward the end of Chapter 2, for guidance on hazardous waste disposal.





## If Your Industrial Wastewater Is Nonhazardous...

Nonhazardous industrial wastewater can be disposed of in a number of different ways:

- **Recycle or reuse it.** If you recycle industrial wastewater, no authorization is required. If you reuse industrial wastewater, you may need to obtain authorization. If you would like to pursue this option, call the TCEQ Wastewater Permitting Section at 512/239-4671.
- **Put it down the drain.** If you discharge to a wastewater collection system (POTW), contact the operator of the system to determine what may be discharged and any other additional requirements.
- **Collect it in a holding tank.** If you collect your industrial wastewater in a holding tank:
  - ▼ have a registered transporter pump the tank out regularly, and
  - ▼ be sure the transporter takes your industrial wastewater to an approved disposal facility.

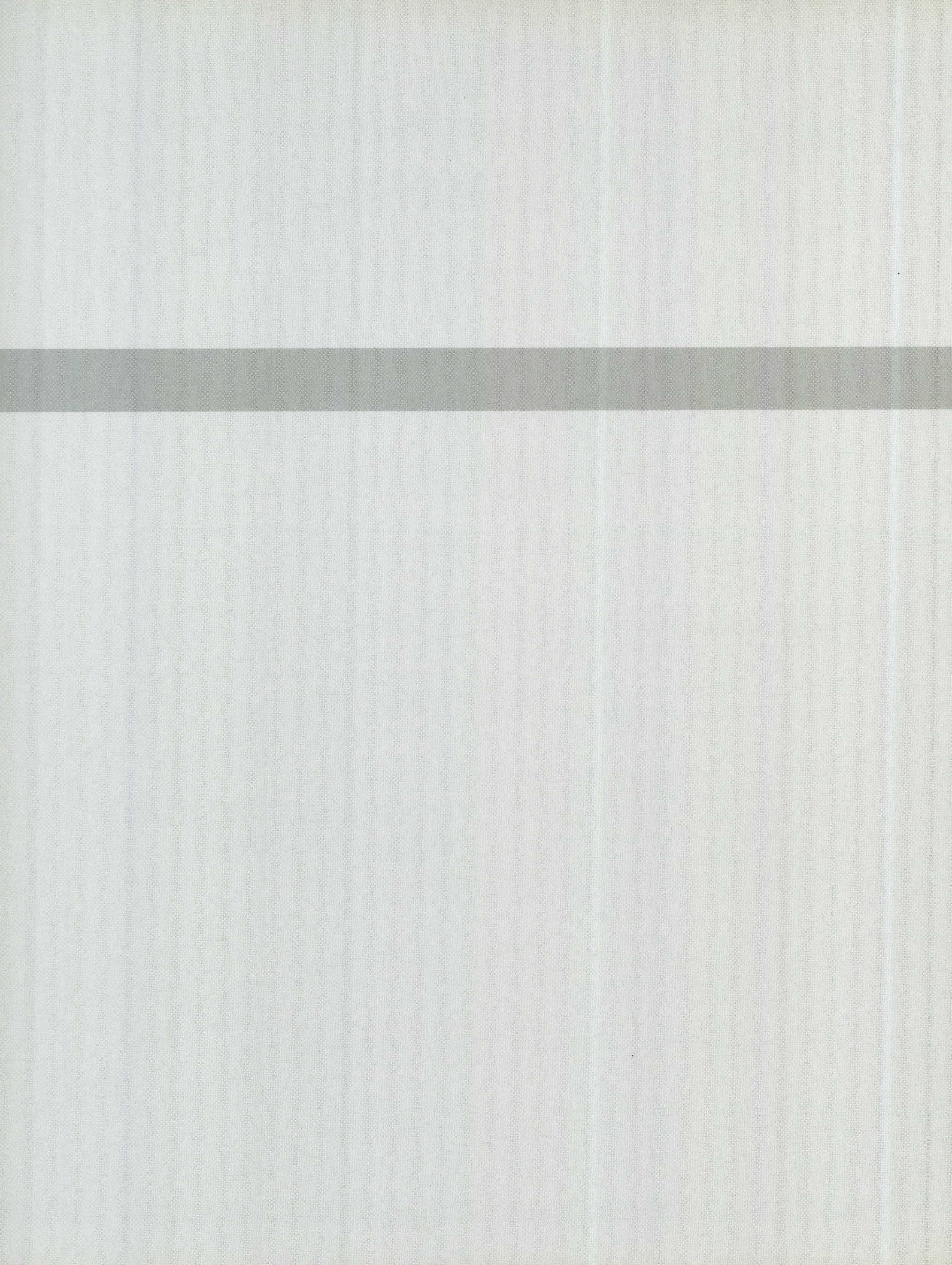
In general, you should also avoid using a Motor Vehicle Waste Disposal well. Also known as Class V

Injection Wells, MVWD wells are shallow wastewater disposal systems that receive fluids resulting from activities at service stations, auto body repair shops, auto dealerships, general and specialty auto repair shops, county or municipal garages, or any facility that performs repair work on automobiles, trucks, airplanes, recreational vehicles, boats, and so forth. This type of wastewater cannot enter drains connected to subsurface disposal devices unless specifically authorized by the TCEQ. New MVWD wells are banned, and existing wells are required to be closed or converted to another type of system by January 2007.

## Common Water Violations for Auto Body Shops

Investigations by the TCEQ show that the three most common water violations are:

- Failing to notify your POTW of wastewater discharge.
- Discharging industrial wastewater into an OSSF (septic tank) without authorization.
- Discharging industrial wastewater to a storm sewer system or a surface water body without authorization.



## **Chapter 4**

# **Preventing Pollution**

### **In this chapter . . .**

<b>How Can Pollution Prevention Benefit My Auto Body Shop? .....</b>	<b>30</b>
<b>How Do I Get a “P2” Program Started at My Auto Body Shop? .....</b>	<b>30</b>
Step 1: Identify Your Auto Body Shop’s Sources of Waste or Pollution .....	31
Step 2: Prioritize Your Waste Streams .....	31
Step 3: Identify Your Options for Reducing Waste or Pollution .....	31
Step 4: Calculate the Payback Cost for Implementing Your Options .....	32
Step 5: Develop a Way to Track the Effectiveness of Your P2 Program .....	32
Step 6: Educate Your Employees .....	33
Step 7: Review Your P2 Program on a Regular Basis .....	33
<b>Is My Auto Body Shop Required to Report P2 Activities? .....</b>	<b>33</b>
<b>Which Other Agencies Might Regulate My Auto Body Shop? .....</b>	<b>33</b>

# Preventing Pollution

**I**f your auto body shop never generated pollution, you wouldn't have to worry about all the rules, regulations, permits, and environmental reporting discussed in this booklet. If you put a good pollution prevention program in place at your auto body shop, you could significantly reduce the regulations that you must comply with.

Pollution prevention, also called "P2," occurs when your auto body shop uses less polluting materials, and utilizes more efficient processes and practices. Pollution prevention may include steps that you take to reduce water, energy, and raw material usage. Or, it might involve a process change that produces less hazardous waste or fewer air emissions.

## How Can Pollution Prevention Benefit My Auto Body Shop?

There are many benefits to implementing a good pollution prevention program at your auto body shop:

- **Cost Savings.** Reducing your bottom line is one of the biggest benefits of pollution prevention. If your auto body shop puts processes in place that consume fewer raw materials, energy, or water, your operating costs will go down.
- **Less Paperwork.** The less pollution you generate at your auto body shop, the fewer environmental rules you will have to comply with. For example, if your auto body shop is a CESQG, you do not have to register or report as a hazardous waste generator to the TCEQ.
- **Reduced Liability.** If your auto body shop generates hazardous waste and it leaks,

spills, or is improperly disposed of, you may be responsible for cleanup costs and penalty fines. If you implement pollution prevention practices and don't generate hazardous waste in the first place, you won't have to worry about this potential liability.

- **Improved Business Image.** Most of your customers are concerned about the environment and how pollution affects their community. Your auto body shop may be able to gain a "competitive edge" if you implement a good pollution prevention program and use its success as part of your marketing strategy.

## How Do I Get a "P2" Program Started at My Auto Body Shop?

Pollution prevention begins with understanding your auto body shop operations in detail: you must understand the processes that are used, the materials that are consumed, and the pollution that is generated. You can begin to develop a plan for your business by taking these steps:

1. Identify your auto body shop's sources of waste or pollution.
2. Prioritize your waste streams.
3. Identify your options for reducing waste or pollution.
4. Calculate the payback cost for implementing your P2 options.
5. Develop a way to track the effectiveness of your P2 program.
6. Educate your employees.
7. Review your P2 program on a regular basis.

## Step 1: Identify Your Auto Body Shop's Sources of Waste or Pollution

You should first identify your shop's sources of waste or pollution. This can be done by developing a simple process-waste table, which clearly shows the raw materials going into your process and the wastes or pollution coming out. You may wish to create a table for each process if there are multiple activities for each phase of your process. Table 12 outlines common processes for auto body shops.

## Step 2: Prioritize Your Waste Streams

Determine which of your waste streams are generated in the greatest quantities, and of these, which are costing you the most money. Table 13 provides an example.

## Step 3: Identify Your Options for Reducing Waste or Pollution

Research the types of waste and pollution reduction technology available for your processes.

For example:

- **Consider the benefits of using a nonhazardous aqueous solvent.** Using a nonhazardous aqueous solvent would eliminate or decrease your purchase and disposal cost.

- **Compare the costs for the disposal of paint wastes and thinners to the purchase price of a distillation unit.** A distillation unit would allow you to recover and reuse the thinner, which would in turn save you money on product purchases (new thinner) and disposal costs.
- **Consider replacing lacquer paints with enamel-based paints.** Enamel-based paints contain less solvent. By changing to this product your auto body shop would reduce VOC emissions. Since enamel-based paints are less likely to react with fiberglass filler, an additional savings in labor is achieved as the need to repaint is reduced.
- **Identify process or equipment changes.** Consider the possibility of switching to mechanical paint stripping methods like plastic bead blasting. This process allows both the beads and paint to be recovered and separated. The beads are re-fed into the pressure gun and the dry waste, composed of paint and any broken beads, is removed for proper disposal (as universal waste).
- **Consider ways to limit your initial resource usage to reduce your waste.** For example, reuse water as much as possible. In your vehicle washing operation, collect wash water and rinse water in a

**Table 12. Common Processes and Wastes for Auto Body Shops**

Process	Waste(s)
Vehicle Preparation	Spill cleanup material, waste compound, tape and paper, antifreeze, batteries, waste oil and oil filters
Painting and Finishing	Empty paint cans, used paint and paint thinner, used paint booth filters, solvent (from paint gun cleaner and parts washer), out-of-date chemicals
Operations Office and Customer Service	Paper wastes (invoices, receipts, parts packaging, shipping materials, etc)

**Table 13. Auto Body Shop Waste Streams and Associated Costs**

Waste Stream(s)	Cost(s)
Solvent (currently using hazardous solvent)	Total cost (solvent purchase and disposal): \$6,300/yr
Waste Paint	Cost of paint: \$41,160/yr

holding tank, then filter and reuse it. When cleaning your shop area, sweep floors and wipe up oil or solvent drips and spills prior to washing. The less foreign material in your wastewater, the easier it is to pre-treat or treat.

There are several pollution prevention resources available to auto body shops. The following web sites provide examples specific to the auto body industry: [www.P2Plan.org](http://www.P2Plan.org), [www.ZeroWasteNetwork.org](http://www.ZeroWasteNetwork.org), and [www.westp2net.org](http://www.westp2net.org).

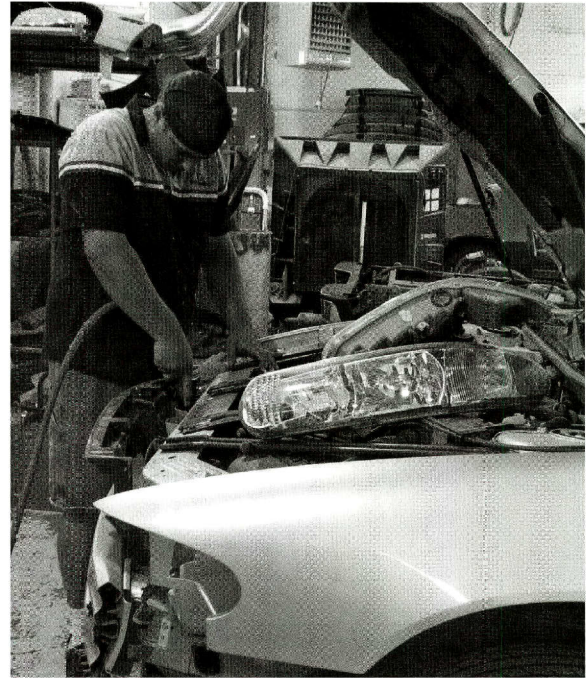
It may be best to identify your largest source of pollution and use this as a starting point in your P2 program.

### Step 4: Calculate the Payback Cost for Implementing Your Options

Calculate what you spend to control or manage pollutants from each process, and compare those figures with costs to reduce pollution from those processes. The cost of managing pollutants or waste are often underestimated. Some items you should consider when estimating your costs are:

- inspection and permit fees
- disposal costs
- sampling and testing fees
- safety equipment and storage facilities
- worker time spent on record keeping and reporting
- liability associated with accidents or improper disposal

Tables 14 and 15 provide two examples.



### Step 5: Develop a Way to Track the Effectiveness of Your P2 Program

Have a clear understanding of the benefits offered by pollution prevention. Set goals based on these benefits, such as time and money saved and reductions in the amounts of waste generated and raw materials used.

Design a spreadsheet or paper tracking form that clearly documents your progress toward these goals. Keeping track of your progress provides you with an opportunity to review, update, and continuously improve your P2 plan.

**Table 14. Comparison of the Cost of Using Hazardous vs. Nonhazardous Solvent**

	Hazardous Solvent	Nonhazardous Solvent
<b>Solvent cost</b>	$(\$3/\text{gal}) \times (1,500 \text{ gal/yr}) = \$4,500/\text{yr}$	$(\$5/\text{gal}) \times (300 \text{ gal/yr}) = \$1,500/\text{yr}$
<b>Solvent disposal cost</b>	$(4 \text{ drums/yr}) \times \$450/\text{drum} = \$1,800/\text{yr}$	\$0/yr
<b>Total Costs</b>	\$6,300/yr	\$1,500/yr

**Table 15. Comparison of the Cost of Using Conventional vs. HVLP Spray Gun**

	Conventional Spray Gun	HVLP Spray Gun
<b>Price of paint per gallon</b>	\$98	\$98
<b>Gallons per year of paint used</b>	420	275
<b>Application efficiency</b>	40%	61%
<b>Total Costs</b>	\$41,160/yr	\$26,950/yr

## Step 6: Educate Your Employees

Your employees should be part of your P2 program. Consider making waste reduction a part of your monthly safety meetings, and offer bonus incentives to employees who actively contribute to your waste reduction program. Remember, your employees will be the best source for ideas on waste reduction. Educate your staff about your goals, and then brainstorm for ideas on how to reduce or eliminate sources of pollution.

## Step 7: Review Your P2 Program on a Regular Basis

Check your operation on a regular basis to find new ways to reduce waste. Keep up with changing technology. Certain products and services may be available today that were not available at the time you originally identified waste reduction options for your auto body shop.

## Is My Auto Body Shop Required to Report P2 Activities?

Under Texas' Waste Reduction Policy Act, or WRPA, if your auto body shop is an SQG, LQG, or TRI reporter (see the TRI box), you are required to:

- prepare a five-year pollution prevention plan,
- submit an executive summary of the five-year plan and a Certificate of Completeness and Correctness to the TCEQ, and
- report to the TCEQ annually on pollution prevention activities (applies only to facilities that are LQGs and TRI reporters).

For more information about WRPA requirements, see the TCEQ publication RG-409, *A Guide to Pollution Prevention Planning*, or go to [www.P2Plan.org](http://www.P2Plan.org). You can also call the TCEQ Industrial Pollution Prevention Team at 512/239-3143.

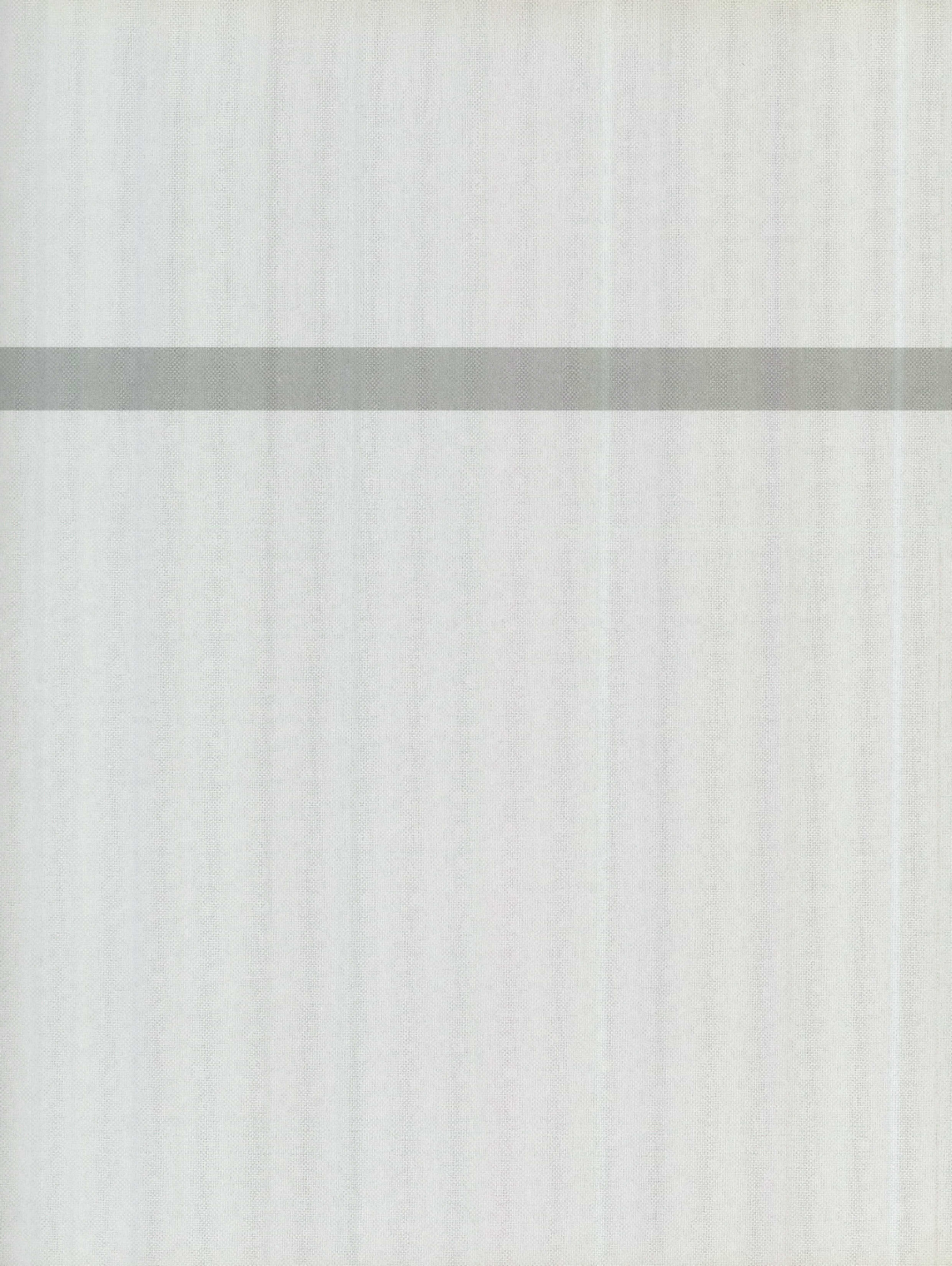
### TRI, or Toxics Release Inventory

Under the federal right-to-know law, certain facilities must report "releases" of specific toxic chemicals in waste. These reports are compiled in a state-by-state Toxics Release Inventory, or TRI. For more information on TRI requirements, contact TCEQ's TRI program at 512/239-4874, or visit the TCEQ's web site, at [www.tceq.state.tx.us](http://www.tceq.state.tx.us). Use the "Search" function to find more information on the "Toxics Release Inventory." You may also visit the EPA's TRI page at [www.epa.gov/tri](http://www.epa.gov/tri).

## Which Other Agencies Might Regulate My Auto Body Shop?

Local, city, county, and federal agencies, as well as other state agencies, may impose other requirements pertaining to registration, notification, permits, inspections, certificates of occupancy, or business licenses. For example:

- Some municipal sewage treatment plants issue local discharge permits and have specific pretreatment requirements.
- Many cities have environmental departments that issue and enforce their own environmental permits.
- The Texas Department of State Health Services requires reporting of large volumes of hazardous materials under its Tier II program; call 512/458-7111 for more information.
- Local fire departments frequently have reporting requirements about chemicals used at your auto body shop.
- The Occupational Safety and Health Administration (OSHA) sets standards for worker safety.







# Appendixes

## In this chapter . . .

A. Permit by Rule 106.436 .....	36
B. Auto Body Compliance Checklist .....	38
C. Emissions Calculations .....	45
D. Spray Booth Air Flow Specifications .....	48
E. Acceptable Stack Designs .....	50
F. Spray Booth Filter Disposal FAQ .....	51
G. TCEQ Regional Offices .....	53

# Permit by Rule 106.436

Body repair and refinishing of motorcycle, passenger car, van, light truck and heavy truck and other vehicle body parts, bodies, and cabs is permitted by rule, provided that all the following conditions of this section are met.

- (1) Before construction begins, the facility shall be registered with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7.
- (2) Facilities which satisfy one of the following conditions.
  - (A) Spray operations that use less than 1/2 pint of coatings and solvents per hour are exempt from all of the requirements of this section except for paragraphs (3), (4), (16), and (17) of this section.
  - (B) Spray operations that use less than two gallons of coatings and solvents per week are exempt from all of the requirements of this section except for paragraphs (3), (4), (8), (11), (12), (14), (16), and (17) of this section unless additional controls are specified in §115.421 of this title (relating to Emission Specifications). Additionally, all overspray emissions must be vented through a filter system that meets the requirements of paragraph (7) of this section.
- (3) Good housekeeping is practiced: spills are cleaned up as soon as possible, equipment is maintained according to manufacturers' instructions, and property is kept clean. In addition, all waste coatings, solvents, and spent automotive fluids including, but not limited to, engine oil, gear oil, transmission fluid, brake fluid, anti-freeze, fresh or waste fuels, and spray booth filters or water wash sludge are disposed of properly. Prior to disposal, all liquid waste shall be stored in covered containers.
- (4) There are no visible emissions leaving the property.
- (5) All spray coating operations which coat more than nine square feet (one panel) shall be performed in a totally enclosed filtered spray booth or totally enclosed filtered spray area with an air intake area of less than 100 square feet. All spray areas shall be equipped with a fan that achieves one of the following requirements:
  - (A) a flow capacity of at least 10,000 cubic feet per minute;
  - (B) a face velocity of at least 100 feet per minute.
- (6) All spray coating operations which coat less than nine square feet (one panel) and are not in a totally enclosed booth shall be performed on or in a dedicated preparation area which meets the following requirements.
  - (A) The preparation area ventilation system shall be operating during spraying, and the exhaust air shall either be vented through a stack to the atmosphere or the air shall be recirculated back into the shop through a carbon adsorption system.
  - (B) If the preparation area is equipped with a carbon adsorption system, the carbon shall be replaced at the manufacturer's recommended intervals to minimize solvent emissions.
  - (C) The preparation area ventilation system shall be equipped with a filter or filter system to control paint overspray.
- (7) All paint booth, spray area, and preparation area overspray (exhaust) filters or filter systems shall have a particulate control efficiency of at least 90%.
- (8) High transfer efficiency coating application equipment shall be used, such as high volume low pressure spray guns. Electrostatic spray guns or other methods, if demonstrated to provide equivalent or better transfer efficiency are acceptable.
- (9) Cleanup emissions shall be minimized by implementing the following procedures:
  - (A) spray and other equipment cleanup is totally enclosed during washing, rinsing, and draining. Non-enclosed cleaners may be used if the vapor pressure of the cleaning solvent is less than 100 millimeters of mercury at 68 degrees Fahrenheit and the solvent is directed toward a drain that leads directly to a remote reservoir;

- (B) all wash solvents are kept in an enclosed reservoir that is covered at all times, except when being refilled with fresh solvents;
  - (C) all waste solvents and other cleaning materials are kept in closed containers.
- (10) All spray booth spray area, preparation area, and shop heaters that are not electrically heated must use pipeline quality natural gas or liquified petroleum gas only and the heaters are five million British thermal units per hour or smaller. No firing of waste coatings, solvents, oils, or other automotive fluids shall be permitted on-site.
- (11) All spray booth, spray area, and preparation area stack heights shall meet the following requirements.
- (A) If the stack is located within 200 feet of a building that is taller than the body shop building, the stack height shall be at least 1.2 times the height of the tallest building or higher as measured from ground level.
  - (B) If the stack is located greater than 200 feet from a building taller than the body shop building, the stack height shall be at least 1.2 times the height of the body shop building as measured from ground level.
  - (C) If any ground level elevation within 250 feet of the spray booth stack is greater than the stack height required in subparagraphs (A) and (B) of this paragraph, this section cannot be used.
- (12) Spray booth, spray area, and preparation area stacks shall be located at least 50 feet away from any residence, recreation area, church, school, child care facility, or medical or dental facility.
- (13) Rain caps, goose neck exhaust, or other stack heads that would restrict or obstruct vertical discharge of air contaminants shall not be allowed.
- (14) The volatile organic compound (VOC) content limits specified in §115.421 of this title, concerning automobile and light-duty truck coatings, shall apply to the facility regardless of its location.
- (15) Definitions of the coating types specified in subparagraphs (A) - (H) of this paragraph are based on §115.10 of this title (relating to Definitions), and the VOC content limits shall be those listed in §115.421 of this title. Shop use of the coating categories listed in subparagraphs (A) - (H) of this paragraph in gallons per month shall not be exceeded:
- (A) cleanup solvents — 50 gallons per month;
  - (B) wipe solvents — 50;
  - (C) precoat — 50;
  - (D) pretreatment — 50;
  - (E) sealers — 50;
  - (F) primers/primer surfacer — 175;
  - (G) top coats — 320;
  - (H) specialty coatings — 50.
- (16) The following records and reports shall be maintained at the shop site for a consecutive 24-month period and be made immediately available upon request of personnel from the commission or any other air pollution control agency with jurisdiction:
- (A) material safety data sheet (MSDS) or other coating data sheets on paint and solvent systems used during the previous 24-month period or currently in use at the shop. The MSDS or coating data sheets should clearly indicate the VOC content of the product and the VOC content of multiple component coatings when mixed according to manufacturers instructions;
  - (B) records of monthly coating and solvent purchases (invoices from suppliers are acceptable);
  - (C) records of monthly paint and solvent use if purchase volumes are above the levels specified for any category in paragraph (15) of this section;
  - (D) additional records are kept in sufficient detail, if necessary, to allow an annual emission inventory to be submitted according to the requirements in §101.10 of this title (relating to Emissions Inventory Requirements);
  - (E) records of the United States Environmental Protection Agency and the commission's Office of Permitting, Remediation, and Registration registration or identification numbers for each waste generator.
- (17) Compliance with the requirements of this section does not eliminate the requirement to comply with all rules of the commission, including §101.4 of this title (relating to Nuisance). The commission may require a facility to cease operation until the matter is resolved.
- (18) After December 31, 1994, the conditions of this permit by rule are effective as to facilities in existence prior to the adoption of this section.

Adopted August 9, 2000  
Effective September 4, 2000

APPENDIX B

# Auto Body Compliance Checklist

This voluntary self-audit tool can help you determine if your site meets TCEQ rules.

Air Regulations	Yes	No	N/A
1. Does the facility have an air permit? Permit # _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. If Yes: Does the facility comply with all permit conditions? (Use "Comments" Section.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Does the facility claim a Permit by Rule (PBR)? Indicate all that apply <sup>1</sup> :			
<input type="checkbox"/> SX89 – Sterilization Chamber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> SX75 – Surface Coating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 106.227 – Soldering, Brazing, Welding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 106.265 – Hand-held and Manually Operated Machines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 106.375 – Aqueous Solutions for electrolytic and Electroless Processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 106.392 – Thermoset Resin Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 106.411 – Steam or Dry Cleaning Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 106.412 – Fuel Dispensing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 106.436 – Auto Body Refinishing Facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 106.452 – Dry Abrasive Blasting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 106.454 – Degreasing Units	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 106.495 – Heat Cleaning Devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Other PBR(s): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. If Yes: Does the facility demonstrate compliance with all conditions of the PBR?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Does the facility maintain records that demonstrate compliance as required by 106.8 for all PBRs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Does spraying operations use less than 1/2 pint of coatings and solvents per hour? If so, the facility is exempt from all requirements except for paragraphs (3), (4), (16), and (17) of 106.436.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Does the facility use less than two gallons of combined coating and solvent per week? If so, the facility is exempt from all requirements of 106.436 except for paragraphs (3), (4), (7), (8), (11), (12), (14), (16), and (17).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are visible emissions leaving the property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<sup>1</sup>Facilities may meet the requirements of a PBR in effect on, or published after, the start of facility construction.

	Yes	No	N/A
9. Does the business avoid being a nuisance (noise, dust, odor, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Does the facility demonstrate that all coating operations which coat more than nine (9) square feet are performed in a totally enclosed filtered spray booth or totally enclosed filtered spray area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Does the facility demonstrate that all totally enclosed filtered spray booths and/or spray areas have an air intake area of less than 100 square feet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Does the facility demonstrate that all spray areas are equipped with a fan that achieves either a flow capacity of at least 10,000 cubic feet per minute or a face velocity of at least 100 feet per minute?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Does the facility demonstrate that all coating operations which coat less than nine (9) square feet and not in a totally enclosed booth, are performed on or in a dedicated preparation area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Does the facility operate a ventilation system in the preparation area during spraying operations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Does the facility demonstrate that the preparation area exhaust air is vented through a stack to the atmosphere or recirculated back into the shop through a carbon adsorption system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. If the preparation area is equipped with a carbon adsorption system, does the facility demonstrate that the carbon is replaced at the manufacturer's recommended intervals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Does the facility demonstrate that the preparation area ventilation system is equipped with a filter or filter system to control paint overspray?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Does the facility demonstrate that all paint booth, spray area, and preparation area overspray (exhaust) filters or filter systems have a particulate control efficiency of at least 90%?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Is high-transfer-efficiency equipment (such as high-volume, low-pressure spray guns [HVLP]) used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Does the facility demonstrate that spray and other equipment cleanup is totally enclosed during washing, rinsing, and draining?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. If non-enclosed cleaners are used, does the facility demonstrate that the vapor pressure of the cleaning solvent is less than 100 millimeters of mercury at 68 degrees Fahrenheit and is the solvent directed toward a drain that leads directly to a remote reservoir?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Does the facility demonstrate that all wash solvents are kept in an enclosed reservoir that is covered at all times, except when being refilled with fresh solvents?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Are all waste solvents and other cleaning materials kept in closed containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Do all heaters that are not electric use pipeline quality natural gas or liquefied petroleum gas only, and are the heaters five million British thermal units (BTUs) per hour or smaller?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Is the facility firing waste coatings, solvents, oils, or other automotive fluids on-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. If other buildings are within 200 feet of the body shop stack, does the facility demonstrate that the stack height is at least 1.2 times higher than the tallest building, measured from ground?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No	N/A
27. If no buildings are within 200 feet of the body shop stack, does the facility demonstrate that the stack height is at least 1.2 times higher than the body shop, measured from ground?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Does the facility demonstrate that there is no ground level elevation within 250 feet of the spray booth stack greater than the stack height requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Does the facility demonstrate that spray booth, spray area, and preparation area stacks are located at least 50 feet away from any residence, recreation area, church, school, child care facility, or medical or dental facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Does the facility demonstrate that there are no rain caps, goose neck exhaust, or other stack heads that would restrict or obstruct vertical discharge of air contaminants?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Does the facility demonstrate that VOC emissions from the coatings or solvents used do not exceed the following limits, as delivered to the application system?			
a. 5.0 pounds per gallon (minus water and exempt solvents) for primers or primer surfacers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. 5.5 pounds per gallon (minus water and exempt solvents) for precoat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. 6.5 pounds per gallon (minus water and exempt solvents) for pretreatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. 5.0 pounds per gallon (minus water and exempt solvents) for single stage topcoats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. 5.0 pounds per gallon (minus water and exempt solvents) for basecoat/clearcoat systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. 5.2 pounds per gallon (minus water and exempt solvents) for three stage systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. 7.0 pounds per gallon (minus water and exempt solvents) for specialty coatings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. 6.0 pounds per gallon (minus water and exempt solvents) for sealers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. 1.4 pounds per gallon of wipe down solutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. If the facility uses any coating(s) or solvent(s) which exceeds the limits of §115.421(a)(8)(B), are daily records of the quantity and type of each coating and solvent consumed in sufficient detail to calculate the daily weighted average of VOC for all coatings and solvents?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Does the facility use less than or equal to the indicated amount in the following coating categories?			
a. Cleanup solvents: 50 gallons per month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Wipe solvents: 50 gallons per month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Precoat: 50 gallons per month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Pretreatment: 50 gallons per month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Sealers: 50 gallons per month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Primers/primer surfacers: 175 gallons per month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Top coats: 320 gallons per month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Specialty coatings: 50 gallons per month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No	N/A
34. Are material safety data sheets (MSDS) on file for the following: paint, solvent, and all other chemicals used during the previous 24-month period or currently in use at the shop site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Are records of monthly coating and solvent purchases (invoices from suppliers are acceptable) during the previous 24 month period at the shop site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Are records of monthly paint and solvent use, if purchase volumes are above the levels specified for any category during the previous 24 month period, at the shop site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. If necessary, are additional records kept in sufficient detail to allow an annual emission inventory to be submitted according to the requirements §101.10 of this title (relating to Emissions Inventory Requirements)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Are records of the United States Environmental Protection Agency and the commission's Office of Permitting, Remediation, and Registration or identification numbers for each waste generator at the shop site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Waste Regulations, General Requirements**

39. Has the business performed a hazardous waste determination on all solid waste streams?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Does the business maintain documentation to support all hazardous waste determinations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Does the business have records of monthly waste generation to support its claimed generator status? Indicate the generator status claimed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- |  |  |
|--|--|
|  | <u>Accumulation Time/Accumulation Quantity</u> |
| <input type="checkbox"/> Conditionally Exempt Small Quantity Generator ..... | No limit / 2,200 lbs or less                   |
| <input type="checkbox"/> Small Quantity Generator .....                      | 180 days or less* / 13,200 lbs or less         |
| <input type="checkbox"/> Large Quantity Generator .....                      | 90 days or less / No limit                     |

\*The accumulation time for small quantity generators can be extended to 270 days if the generator must transport waste 200 miles or more.

42. Is the facility registered with the TCEQ as a hazardous waste generator? (no registration for CESQG)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TCEQ Registration # _____ EPA ID _____			
43. Is the facility an industrial waste generator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. If Yes: Is all nonhazardous waste classified as Class 1, Class 2, or Class 3?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. If this facility generates greater than 220 lbs of Class 1 waste, is it registered with the TCEQ? (Only required if not already registered as SQG or LQG.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Is the business' Notice of Registration (NOR) up to date, including all waste streams and waste management units? (Not required for CESQG.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Has the business submitted an Annual Waste Summary each year? (Not required for CESQG.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Does the business fulfill all other record keeping and reporting requirements for its generator status?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No	N/A
<b>Waste Regulations, On-Site Accumulation Requirements</b>			
49. Does the business comply with appropriate accumulation time requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. Does the business comply with appropriate accumulation quantity requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. Is hazardous waste accumulated in tanks at the business?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52. If Yes:			
a. Has the tank system's integrity been assessed and certified by an independent, qualified, registered professional engineer? (LQG only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Are tanks labeled with the words hazardous waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Are records kept of daily tank inspections?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Do tanks have a secondary containment system designed to contain 100% of the largest tank within its boundary? (LQG only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. If Yes: Is the secondary containment designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system or does the collection system have sufficient excess capacity to contain run-on or infiltration of precipitation from a 25-year 24-hour rainfall event? (LQG only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53. Is hazardous waste accumulated in container storage areas at the business?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54. If Yes: Are waste containers labeled, dated, closed, and compatible with their contents?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55. If business is a small quantity generator or large quantity generator:			
a. Does the business conduct weekly container inspections for leakage and deterioration?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Does the business document weekly container inspections?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have employees been trained in the handling of hazardous waste, with regards to their job duties?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Has an emergency response coordinator and alternate been designated, available 24 hours a day to respond to on-site spills and accidents?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Have emergency numbers been posted by the telephone at the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56. Is hazardous waste accumulated in satellite accumulation areas at the business?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57. If Yes: (required by SQG and LQG)			
a. Are waste containers labeled, closed, and compatible with their contents?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Is the amount of accumulated waste at each satellite accumulation point less than 55 gallons (or 1 quart of acutely hazardous waste)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Is waste from the satellite area moved to a waste management unit within 3 days once the 55 gallon limit (or 1 quart of acutely hazardous waste) is exceeded?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Is the location of the satellite accumulation area documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



	Yes	No	N/A
58. Have all on-site and off-site hazardous waste recycling activities been registered with the TCEQ? (entered on NOR or TCEQ 0525; SQG & LQG only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

59. If hazardous waste is treated, stored, or disposed of on-site, has the business compiled a waste analysis plan (WAP) or obtained a permit for that activity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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### Waste Regulations, Transportation and Disposal Requirements

60. Does the business use a TCEQ/EPA registered transporter? (CESQGs may transport their own waste, without a manifest, to an authorized facility.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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61. Does the business use a TCEQ/EPA permitted treatment, storage, disposal (TSD) facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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62. Does the business manifest all hazardous and Class 1 waste that is transported? (SQG, LQG, and CESQGs that generate more than 220 lbs of Class 1 waste.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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63. Does the business have copies of manifests for the last 3 years? (SQG and LQG only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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### Universal Waste Regulations

64. Does the facility currently manage any of its hazardous waste streams as "universal waste?"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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65. If Yes: Are the waste streams appropriately classified and eligible for coverage under the universal waste rule?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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66. Are all containers holding universal waste properly labeled per 30 TAC 335.261?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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67. Are containers kept closed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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68. Are all universal waste streams shipped to a TSDF or universal waste handler within one year of their initial generation date? If not, does the facility have appropriate documentation on hand to show that an extended time limit is needed to facilitate proper recovery, treatment or disposal?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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69. If the facility is a Large Quantity Handler of universal waste, are all universal waste shipments accompanied by a bill of lading or other shipping document?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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70. Does the business use a TCEQ/EPA permitted recycling, treatment, storage, or disposal (TSD) facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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71. Does the business have Land Disposal Restriction (LDR) certifications per waste stream and per disposal facility for the last 3 years? (SQG & LQG only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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### Water Regulations, Discharges to Publicly Owned Treatment Works (sanitary sewer system)

72. Does the business discharge process wastewater to the sewer system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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73. If Yes: Has the business obtained permission from the POTW to discharge wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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74. a. If the city has a pretreatment program, does the facility have a pretreatment permit with the city to discharge to the POTW?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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b. Does the facility demonstrate compliance with the requirements of that permit? If this question is not applicable move on to question 75.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	Yes	No	N/A
75. a. Is the business a Categorical Industrial User, as listed in 40 CFR 405-471? (If No, the business may be required to submit semi-annual monitoring reports to the TCEQ if it is a significant non-categorical industrial user. It is also recommended that the business contact the city and inform them of the nature of their discharge.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. If Yes: Does the business submit monitoring reports to the TCEQ each June and December?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Waste Regulations, Discharges to Water

76. Does the business discharge wastewater into surface water (via run-off, storm drains, rivers, creeks, dry water ways, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
77. If Yes: Does the business have a Texas Pollutant Discharge Elimination System (TPDES) permit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
78. Does the business dispose of wastewater adjacent to surface water? (by irrigation, evaporation pond, subsurface injection, or another approved method)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
79. If Yes: Does the business have a Texas Land Application permit? (Note: If hazardous or Class I industrial waste is being disposed of, then multiple other regulations apply.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80. <b>Discharges to On-Site Sewage Facilities</b> Does the facility avoid discharging any process wastewater to a septic system? (Note: On-site septic systems can only be used for domestic sewage.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Other Requirements

81. If the business uses more than 10,000 lbs (20 drums) of cleaning chemicals or other listed chemicals in a year, and has more than 10 full-time employees, does the business report under the Toxic Release Inventory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
82. Does the business comply with Texas Department of Health requirements of Tier II?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
83. Is the business subject to the Waste Reduction Policy Act (WRPA)? (If you are an SQG or LQG, or report on Form R, you are.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
84. If Yes:			
a. Has a Source Reduction Waste Minimization Plan (SR/WM) been developed? (SQG, LQG, and TRI reporters submit once every 5 years.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Has an executive summary of the SR/WM Plan and a Certificate of Completeness and Correctness been submitted? (SQG, LQG, and TRI reporters only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Has an annual progress report been submitted? (LQG and TRI reporters only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
85. Is there any evidence of spills?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
86. If Yes: Has the business taken appropriate reporting and abatement actions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
87. Does the facility practice good housekeeping?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This checklist is for guidance purposes only. It is not a substitute for the rules and regulations. The Small Business and Local Government Assistance Program (SBLGA) is an independent section, separate from enforcement, of the Texas Commission on Environmental Quality (TCEQ). Contact SBLGA on their toll-free Hot Line, 1-800-447-2827, or on the Internet, at [www.sblga.info](http://www.sblga.info).

# Emissions Calculations

You will calculate your emissions in three steps:

- determine maximum hourly emissions;
- determine annual “actual” emissions; and
- determine annual “potential to emit.”

As discussed in Chapter 1, many requirements apply only if your potential to emit exceeds certain thresholds. Your potential to emit is equal to the emissions your business would create if you operated at your maximum design capacity, 365 days a year, 24 hours per day.

## Maximum Hourly Emissions

Look at your busiest hour from your coating-use records. How many gallons of coating (including thinner) were applied during that one hour?

Write that number here: \_\_\_\_\_ gallons/hour.

Now find out how many pounds of volatile organic compounds, or VOCs, are in one gallon of coating. You can find this information from Material Safety Data Sheets (MSDS), suppliers, and/or product labels.

Write that number here: \_\_\_\_\_ pounds/gallon.

Plug these numbers into the following equation:

$$\left( \frac{\text{gallons of coating applied (including thinner)}}{1 \text{ hour}} \right) \times \left( \frac{\text{pounds of VOCs}}{1 \text{ gallon of coating}} \right) = \left( \frac{\text{pounds of VOC emissions}}{1 \text{ hour}} \right)$$

### Example:

Let's say, in your busiest hour, you used 0.5 gallons of coating mixed with thinner. You called your coating supplier and he told you that there are 3 pounds of VOCs in one gallon of coating and thinner mixed together. Multiply 0.5 by 3 to get the amount (in pounds) of VOCs emitted in one hour.

$$\left( \frac{0.5 \cancel{\text{ gallons}} \text{ of coating}}{1 \text{ hour}} \right) \times \left( \frac{3 \text{ pounds of VOCs}}{1 \cancel{\text{ gallon}} \text{ of coating}} \right) = 1.5 \text{ pounds of VOC emissions per hour}$$

The “gallons” cancel out, leaving you with pounds per hour.

## Annual Actual Emissions

Now, to find out how many tons of VOCs are produced per year, first multiply the number of pounds of VOC emissions per hour by the number of hours worked per year. Then take that number and divide it by 2,000 (since there are 2,000 pounds in one ton). This will give you the number of tons of VOCs emitted per year.

For example, if your facility is operating 8 hours per day, 5 days per week, 52 weeks per year, than that means that you are operating for 2,080 hours per year.

$$8 \text{ hours/day} \times 5 \text{ days/week} \times 52 \text{ weeks/year} = 2,080 \text{ hours/year.}$$

You calculated on the prior page that your facility emits 1.5 pounds of VOCs per hour. So we will take 1.5 pounds per hour and multiply that number by the number of hours worked per year, which is 2,080. This will give you 3,120 pounds per year.

To get tons of VOCs emitted per year, take 3,120 and divide by 2,000. The result is 1.56 tons of VOCs emitted per year.

$$\left( \frac{1.5 \text{ pounds of VOCs}}{1 \text{ hour}} \right) \times \left( \frac{2,080 \text{ hours worked}}{1 \text{ year}} \right) = 3,120 \text{ pounds of VOCs per year}$$

The "hours" cancel out, leaving you with pounds per year.

$$\left( \frac{3,120 \text{ pounds}}{1 \text{ year}} \right) \times \left( \frac{1 \text{ ton}}{2,000 \text{ pounds}} \right) = 1.56 \text{ tons of VOCs per year}$$

The "pounds" cancel out, leaving you with tons per year.

## Maximum Annual Potential to Emit

The easiest way to calculate your potential to emit is to multiply your maximum hourly rate of emissions by 8,760 hours—the maximum number of hours in a year.

$$(24 \text{ hours/day}) \times (365 \text{ days/year}) = 8,760 \text{ hours/year}$$

You calculated your maximum hourly emission rate above:

$$\left( \frac{1.5 \text{ pounds of VOCs}}{\text{hour}} \right) \times \left( \frac{8,760 \text{ hour}}{\text{year}} \right) = 13,140 \text{ pounds of VOCs per year}$$

$$\left( \frac{13,140 \text{ pounds}}{\text{year}} \right) \times \left( \frac{1 \text{ ton}}{2000 \text{ pounds}} \right) = 6.57 \text{ tons of VOCs per year}$$

For this example, the potential to emit is 6.57 tons of VOCs per year.

Once you have calculated your potential to emit, compare it to the limits for your county in Table 3 of Chapter 1. If your potential to emit is above the threshold for your county, you are a “major source.”

# Spray Booth Air Flow Specifications for PBR 106.436

## 1. What spray booth air flow specifications are required for Permit by Rule (PBR) 106.436: Auto Body Refinishing Facility?

With regard to spray booth air flow, PBR 106.436 provides facilities with two options. The first option requires a fan with a **fan flow capacity** of at least 10,000 cubic feet per minute (cfm). The second option requires a **face velocity** of at least 100 feet per minute (fpm) measured at the air intake opening. Regardless of which option you choose, PBR 106.436 requires that the **air intake area** be less than 100 square feet.

## 2. How do I determine my air intake area, fan flow capacity, and face velocity?

### Air Intake Area

The air intake area is the total area through which air **enters** the spray booth. To calculate the face velocity you must first measure the air intake area. The total air intake area can never be greater than 100 square feet. Remember, the air intake area is the area through which air enters the booth and not the size of your filters.

*Example 1.* If air passes through a single intake vent and the shape of the vent is square or rectangular, the calculation is simply:

$$\text{length of vent} \times \text{width of vent} = \text{air intake area} \quad (L \times W = \text{area})$$

*Example 2.* If the shape of the air intake vent is circular:

$$\pi \times r^2 = \text{area} \quad (\pi = 3.14 \text{ and } r = \text{radius of air intake area})$$

*Example 3.* If air is passed through two or more intake vents, add all the areas to determine the intake area.

$$\text{area}_1 + \text{area}_2 + \text{area}_3 = \text{total intake area}$$

Note: If the air intake area is neither circular nor rectangular/square, estimate the area using either formula given in Examples 1 or 2.

### Fan Flow Capacity (Option 1)

This option requires the installation of a large fan, at least 10,000 cfm. The fan flow capacity is the amount of air that the fan can move through a booth and out a stack. The fan flow is measured in cubic feet per minute (cfm). Often, a facility is unsure of its fan flow capacity and no longer has any of the fan specification paperwork. Check for the make and model identification on the fan itself and check with the manufacturer or vendor for specifications.

## Face Velocity (Option 2)

This option requires a minimum face velocity of 100 fpm, regardless of the size of the fan. Face velocity is the velocity of the air as it moves through an area equal to and calculated at the air intake area. Calculating face velocity is the same for all types of spray booths (side draft, end draft, or down-draft booths, and enclosed work areas).

1. First, you must know your **fan flow capacity** in cubic feet per minute.
2. Then, determine the area of your **air intake opening**.
3. Finally, divide the **fan flow capacity** by the **air intake area**.

$$\left( \frac{\text{fan flow capacity (feet}^3 \text{ per minute)}}{\text{air intake area (feet}^2\text{)}} \right) = \text{face velocity (feet per minute)}$$

$$\text{Unit Calculation: } \left( \frac{\text{feet}^3 \text{ per minute}}{\text{feet}^2} \right) = \left( \frac{\text{feet}^3}{\text{minute}} \right) \times \left( \frac{1}{\text{feet}^2} \right) = \left( \frac{\text{feet}}{\text{minute}} \right)$$

Face velocity can either be **calculated**, using the formula above, or **measured**, using a vane anemometer. The cost of this measurement device ranges from approximately \$20 to \$200, and it can be purchased through an industrial equipment catalog. You could also check with your supplier or vendor to see if they have one of these devices for you to borrow.

### 3. What if the air intake area is less than 100 square feet?

PBR 106.436 requires **either** a fan flow capacity of at least 10,000 cfm **or** a face velocity of at least 100 fpm. The air intake area may be no larger than 100 square feet in either case. If the air intake area is smaller, the fan flow capacity may be less than 10,000 cfm and still maintain the required face velocity of at least 100 fpm.

*Example 1.* A fan flow capacity of 7,000 cfm will provide a face velocity of 100 fpm if the air intake area is reduced to 70 square feet.

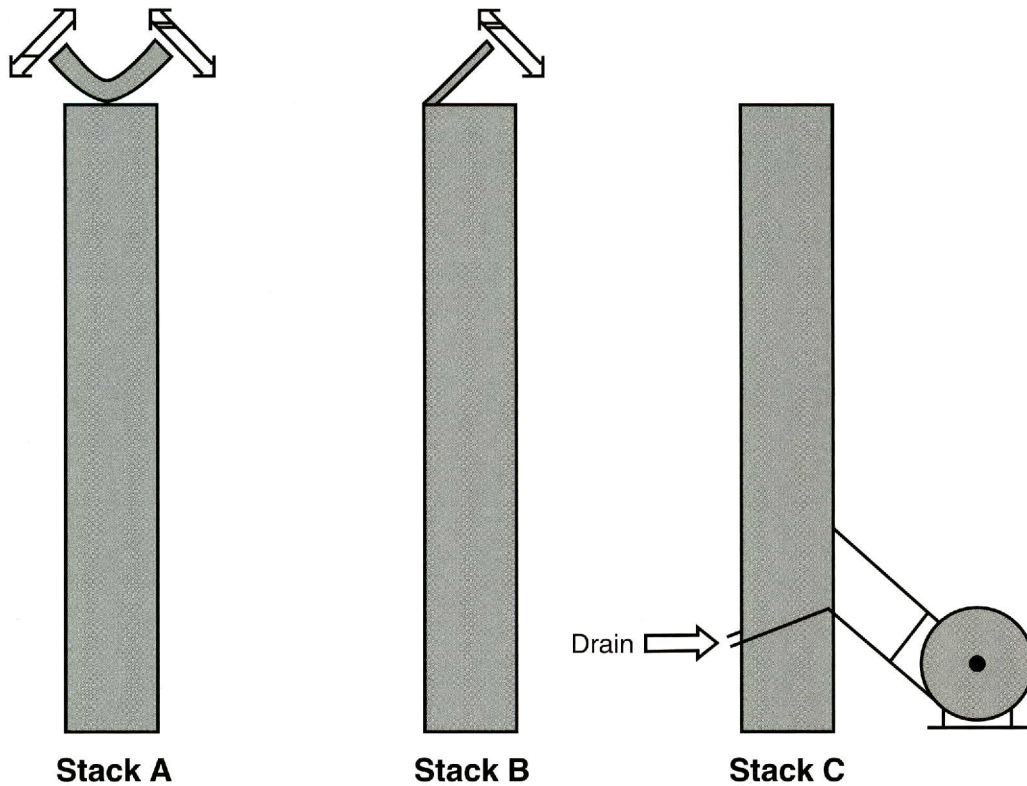
$$\left( \frac{7,000 \text{ feet}^3 \text{ per minute}}{70 \text{ feet}^2} \right) = 100 \text{ feet per minute}$$

*Example 2.* An air intake area of 40 square feet will require a fan capacity of only 4,000 cfm to obtain a 100 fpm face velocity.

$$\left( \frac{4,000 \text{ feet}^3 \text{ per minute}}{40 \text{ feet}^2} \right) = 100 \text{ feet per minute}$$

APPENDIX E

# Acceptable Stack Designs for PBR 106.436



The examples on this page offer rain protection without obstructing air flow. The rain protection on stacks A and B is pushed up when the fan is on. Stack C is designed so that water drains out the side of the stack



# Spray Booth Filter Disposal FAQ

## 1. What are the TCEQ's regulations for disposal of my spent spray booth filters?

The TCEQ's rule for the disposal of spent spray booth filters is simple. If the filter is hazardous due to contamination from paint residue, then it can be managed under the universal waste rule, as described in 30 Texas Administrative Code (TAC), Section 335.261, for paint and paint-related waste. If the filter is not hazardous, then it can be disposed of in your regular trash. Therefore, you must determine whether your spray booth filter is hazardous.

## 2. How do I determine whether my spray booth filters are hazardous?

To determine whether your waste is hazardous or not, you first need to collect information about your processes and wastes. You should conduct a waste determination on your filters regardless of what you are painting. You may conduct a waste determination using one of two methods: process knowledge or laboratory analysis.

### Process Knowledge

One way of determining whether your waste is hazardous is through "process knowledge." This means that by considering information about the product or waste, from whatever source is available, a decision can be made as to whether the waste is hazardous or not. Metals in the paint are the primary consideration when determining whether a filter is hazardous or not. The primary metals to be concerned about in paints are lead, chromium, and cadmium. Since most paint manufacturers no longer use lead, chromium, or cadmium in their paint, it is unlikely that the filters will be hazardous due to these constituents. However, it is very important to check your Material Safety Data Sheets (MSDS) to make sure your paints do not contain any heavy metals. If they do, check with your paint representative to see if there are any metal-free alternatives. Make sure you document how and why you came to your decision, in case you are ever asked to show how you made your determination.

### Laboratory Analysis

If you believe the filters may contain metals, you may choose to have them tested by a laboratory. The test the laboratory would run is called a Toxicity Characteristic Leaching Procedure (TCLP). Prices for testing would probably average around \$200 to \$300. The laboratory will provide you with information about what is in the filter but will not determine whether the waste is "hazardous." You must determine if the filter is hazardous, based on the laboratory analysis. If testing indicates that the filters are non hazardous, the determination will be valid as long as you continue to use the same paints. However, if you change paints you must once again determine whether they are hazardous. If you determine that the filters contain metals but choose not to have them tested, you should dispose of the filters as hazardous waste. This may increase your waste disposal costs and record keeping, but it will be the safe thing to do.

## 3. Since most solvents are considered hazardous and the paint that gets on the filter contains solvents, does that make my filter hazardous?

No! The TCEQ recognizes that the amount of solvent that actually reaches the filter is minimal and evaporates quickly. Therefore, a dry filter will not be considered hazardous because it came in contact with a solvent. Metals in the paint are the primary consideration in determining whether a filter is hazardous or not.

## 4. What do I do if my filters are hazardous?

Filters that have been determined to be hazardous can be disposed of as universal waste. You should place the filters in a metal or plastic drum and label the container "universal waste—paint and paint-related waste." You must make sure that hazardous waste is transported and disposed of by transporters and disposal facilities registered with the TCEQ. If you are a conditionally exempt small quantity generator (CESQG), you may be able to dispose of your hazardous

waste through your regular trash. Check with your disposal service to be sure they will allow it **before** disposing of any hazardous waste in your regular trash. To determine whether you are a CESQG or fall under some other category, you may contact the TCEQ's Small Business and Environmental Assistance program at 1-800-447-2827 for more information.

**5. What if I determine my filters are not hazardous?**

If you have determined that the filters are non hazardous (either by testing or by carefully reviewing the MSDSs or other such documentation to make sure there are no metals in the paints), then the TCEQ has determined that these dry filters may be disposed of in your regular trash. However, you will need to check with your disposal service, since they may have additional restrictions.

**6. What is the Universal Waste Rule and how does it affect spray booth filters?**

On October 24, 1999, the TCEQ made the Universal Waste Rule for Paint and Paint-related Material effective. This rule applies to used or unused paint and paint-related material that is considered hazardous waste. Spray booth filters

that are determined to be hazardous fall under this rule. A facility that does not accumulate more than 5,000 kilograms (11,000 lbs.) of universal waste at any time is considered a Small Quantity Handler of Universal Waste. This is not to be confused with a Small Quantity Generator (SQG) of hazardous waste. If you are an SQG and generate hazardous paint and paint-related materials, you can now remove these wastes from your monthly volume by managing them as a universal waste. This may allow you to change your generator status from SQG to CESQG. If you generate hazardous waste and are unsure about how to determine your generator status or would like more information on the Universal Waste Rule for Paint and Paint-related Materials, contact the TCEQ's Small Business and Environmental Assistance program at 1-800-447-2827 for more information.

**7. Are there any other rules that may apply to the disposal of filters?**

Maybe! Check your local city ordinances including the fire marshal's office and your waste hauling service. They may have their own regulations that apply to the proper disposal of spray booth filters.

## APPENDIX G

# TCEQ Regional Offices Information

### 1 – AMARILLO

Regional Director – Brad Jones  
3918 Canyon Dr.  
Amarillo, TX 79109-4933  
806/353-9251 • FAX: 806/358-9545

### Perryton Office

511 South Main  
Perryton, TX 79070  
806/435-8059 • FAX: 806/434-8443

### 2 – LUBBOCK

Regional Director – Randy Ammons  
3113 34th St.  
Lubbock, TX 79410-3227  
806/796-7092 • FAX: 806/796-7107

### 3 – ABILENE

Regional Director – Winona Henry  
1977 Industrial Blvd.  
Abilene, TX 79602-7833  
325/698-9674 • FAX: 325/692-5869

### 4 – DALLAS/FORT WORTH

Regional Director – Tony Walker  
2309 Gravel Dr.  
Fort Worth, TX 76118-6951  
817/588-5800 • FAX: 817/588-5700

### Stephenville (Confined Animal Feeding Operations)

580-D W. Lingleville Rd.,  
Stephenville, TX 76401  
254/965-9200 or 1-800-687-7078

### 5 – TYLER

Regional Director – Leroy Biggers  
2916 Teague Dr.  
Tyler, TX 75701-3734  
903/535-5100 • FAX: 903/595-1562

### 6 – EL PASO

Regional Director – Archie Clouse  
401 E. Franklin Ave., Ste. 560  
El Paso, TX 79901-1212  
915/834-4949 • FAX: 915/834-4940

### 7 – MIDLAND

Regional Director – Jed Barker  
3300 North A St., Bldg. 4-107  
Midland, TX 79705-5451  
432/570-1359 • FAX: 432/570-4795

### 8 – SAN ANGELO

Regional Director – Ricky Anderson  
622 S. Oakes, Ste. K  
San Angelo, TX 76903-7035  
325/655-9479 • FAX: 325/658-5431

### Concho Watermaster Office

325/481-8069 or 1-866-314-4894  
FAX: 325/658-5431

### 9 – WACO

Regional Director – Anna Dunbar  
6801 Sanger Ave., Ste. 2500  
Waco, TX 76710-7826  
254/751-0335 • FAX: 254/772-9241

### 10 – BEAUMONT

Regional Director – Georgie Volz  
3870 Eastex Fwy.  
Beaumont, TX 77703-1830  
409/898-3838 • FAX: 409/892-2119

### 11 – AUSTIN

Regional Director – Patty Reeh  
1921 Cedar Bend Dr., Ste. A150  
Austin, TX 78758-5327  
512/339-2929 • FAX: 512/339-3795

### 12 – HOUSTON

Regional Director – Donna Phillips  
5425 Polk St., Ste. H  
Houston, TX 77023-1452  
713/767-3500 • FAX: 713/767-3520

### 13 – SAN ANTONIO

Regional Director – Richard Garcia  
14250 Judson Rd.  
San Antonio, TX 78233-4480  
210/490-3096 • FAX: 210/545-4329

### South Texas Watermaster Office

210/490-3096 • FAX: 210/545-4329  
1-800-733-2733

### 14 – CORPUS CHRISTI

Regional Director – Susan Clewis  
NRC Bldg., Ste. 1200  
6300 Ocean Dr., Unit 5839  
Corpus Christi, TX 78412-5839  
361/825-3100 • FAX: 361/825-3101

### 15 – HARLINGEN

Regional Director – Lorinda Gardner  
1804 West Jefferson Ave.  
Harlingen, TX 78550-5247  
956/425-6010 • FAX: 956/412-5059

### Rio Grande Watermaster Office

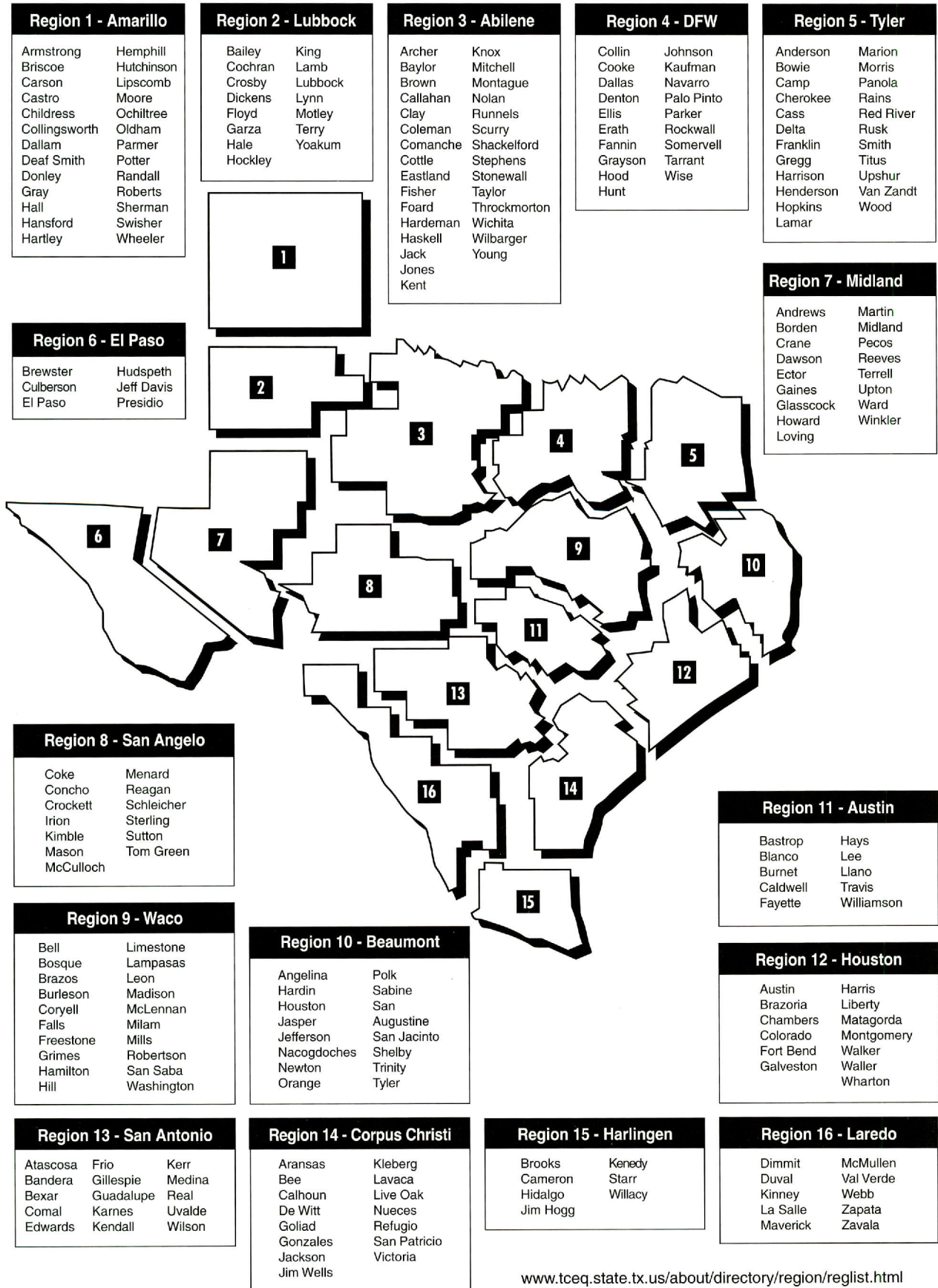
956/430-6056 or 1-800-609-1219  
FAX: 956/430-6052

### Eagle Pass Office

1152 Ferry St., Ste. H  
Eagle Pass, TX 78852-4367  
830/773-5059 • FAX: 830/773-4103

### 16 – LAREDO

Regional Director – Lorinda Gardner  
707 East Calton Rd., Ste. 304  
Laredo, TX 78041-3887  
956/791-6611 • FAX: 956/791-6716



[www.tceq.state.tx.us/about/directory/region/reglist.html](http://www.tceq.state.tx.us/about/directory/region/reglist.html)

## **Where Can I Find the “TCEQ Rules”?**

The TCEQ enforces both state and federal environmental rules. These rules, and how you can obtain them, are briefly explained below.

### **State Rules**

State rules enforced by the TCEQ are found in Title 30 of the Texas Administrative Code, which we will refer to as “30 TAC” in the rest of this guide. The TCEQ develops these rules by following state and federal law and inviting the participation of interested parties. The Texas Secretary of State publishes the official version of these rules in the *Texas Register* and on their web site, [www.sos.state.tx.us](http://www.sos.state.tx.us).

### **Federal Rules**

Federal rules are developed and enforced by the U.S. Environmental Protection Agency (EPA), but often the EPA delegates the enforcement of these rules to the state environmental agency—in Texas, the TCEQ. EPA rules are found in Title 40 of the Code of Federal Regulations—or 40 CFR, as you will see it in the rest of this guide. You can find these rules through the EPA web site, [www.epa.gov/epahome/cfr40.htm](http://www.epa.gov/epahome/cfr40.htm).

### **Why Read the Rules if I Have This Guide?**

As a simplified explanation of the rules, this guide is intended to help almost all auto body shops comply with environmental regulations. But this guide is just one tool to use to reach your goal of full compliance. If you find yourself confused by any part of this guide, remember that the rule—not this guide—is what you must follow.



**Small Business and Local Government Assistance  
Texas Commission on Environmental Quality**

## Contact Us

### On the Phone

For confidential assistance, call us.

*Toll free number:* 1-800-447-2827

### On the Web

We have a great deal of information on the web.

*Web site:* [www.sblga.info](http://www.sblga.info)

For compliance information specific to auto body shops, click on "Auto Body Shops"

### Forms and Publications

Single copies of most TCEQ publications and forms are free.

Just place an order.

- *By phone:* 512/239-0028
- *By fax:* 512/239-4488
- *By mail:* TCEQ Publications, MC 195, PO Box 13087, Austin, TX 78711-3087
- *On the web:* [www.tceq.state.tx.us](http://www.tceq.state.tx.us) (choose the option "Forms & Publications," located on the left side of the TCEQ home page)

### Other Useful Web Sites

Occupational Safety and Health Administration:

[www.osha.gov/SLTC/autobody/index.html](http://www.osha.gov/SLTC/autobody/index.html)

Automotive Body Repair News:

[www.abrn.com/abrn](http://www.abrn.com/abrn)