

# Consolidated Screening Checklist for Automotive Repair Facilities Guidebook



#### **Disclaimer**

**The consolidated screening checklist and guidebook is a tool to help you evaluate compliance at your automotive service and repair shop. It does not contain an exhaustive list or description of all federal environmental regulations that may apply to your shop. In addition, your shop is responsible for knowing and complying with all applicable state, local, and tribal requirements.**

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## INTRODUCTION

The United States Environmental Protection Agency (EPA) developed the *Consolidated Screening Checklist for Automotive Repair Facilities Guidebook* as a public service to the automotive service and repair industry. EPA's Office of Compliance, through various meetings with industry representatives, facility owners, and technicians, determined there was a need for compliance assistance to automotive repair shops to help them attain or remain in compliance with applicable federal environmental regulations. The checklist and guidebook highlight important or key environmental requirements as they apply to the various federal environmental programs. This guidebook is an update to the 1997 guidebook. EPA has revised several environmental regulations applicable to the automotive service and repair industry since the last publication, specifically the shallow non-hazardous industrial waste injection wells known as Class V wells and, the applicability of the spill prevention and countermeasures and control program to automotive fueling tanks and used oil storage. The motor vehicle air conditioning is expanded to include retrofitting motor vehicle air conditioning units and the use of alternative refrigerants. Additional environmental requirements are added as reminders should the shop owner plan to expand or build a new facility, or use weed killer, insect spray or restroom cleaners and disinfectants around the shop.

### HOW CAN I USE THE CHECKLIST AND GUIDEBOOK?

You can use the checklist and guidebook to evaluate your facility's compliance with the federal environmental regulations which are applicable to the automotive service and repair industry. If problems with compliance are discovered while completing the checklist, you may want to conduct a more comprehensive self-audit.

**Please remember that this checklist and guidebook are a beginning, not the final word, on environmental compliance requirements.** While federal environmental requirements are highlighted in the checklist and guidebook, a comprehensive discussion of all requirements is NOT included. In addition to federal requirements, you may be subject to state, tribal, and/or local requirements. You should use this information to build a basic understanding of federal environmental requirements, and then seek additional assistance from various federal, state, tribal, and local agencies.

If you are not sure about your state and/or local environmental requirements, contact your state and local environmental office. These offices can be found in the Blue Pages of your local telephone directory. If you do not know who to contact, you might consider the CCAR-GreenLink® Compliance Assistance Center. CCAR-GreenLink® is a partnership between the EPA and the Coordinating Committee for Automotive Repair (CCAR). CCAR is an automotive industry organization whose mission is to augment the professionalism of automotive technicians.

There are several ways to reach CCAR-GreenLink®:

**CCAR Toll-Free: 1-888-GRN-LINK (476-5465)**

**CCAR Internet Address: <http://www.ccar-greenlink.org>**

**Phone: 1-913-498-2227 (CCAR)**

## HOW ARE THE CHECKLIST AND GUIDEBOOK ORGANIZED?

**What Is Included?** Following this introductory section are the checklist and guidebook. The major environmental programs affecting automotive repair shops are highlighted in the following sections:

- Section 1.0 Waste Management
- Section 2.0 Wastewater and Storm Water Management
- Section 3.0 Air Pollution Controls and Other Requirements
- Section 4.0 Storage Tanks, SPCC, and Emergency Response
- Section 5.0 Recordkeeping

Following these five sections, a glossary of terms is provided for your information.

**Where Do I Start?** You should first become familiar with the guidebook because it is more comprehensive than the checklist in terms of environmental compliance information and issues. Once you are familiar with the guidebook, use the checklist to conduct a compliance evaluation of your shop. It is strongly recommended that the automotive service and repair shop review the checklist on a monthly basis to make sure the shop continues to comply with the appropriate environmental regulations.

The two-page checklist is a streamlined version of the guidebook and is included to help make the evaluation of your facility's compliance easy and efficient. The checklist is designed to evaluate specific activities and requirements at your shop, it does NOT include all of the questions or activities found in the guidebook.

Each checklist question will ask you about key environmental requirements that are applicable to an automotive repair shop. After reading each question, pick the most appropriate response for your facility. If you are unsure of what is being asked by the question or what a response means when using the checklist, refer to the same question in the guidebook. The guidebook includes some general explanatory text for each question, as well as explanations of each response. A "✓" next to a response in the guidebook indicates that it is a preferred response in terms of environmental compliance (see box). The use of the guidebook is encouraged as it will help you and others at your facility conducting evaluations to consistently and accurately respond to the compliance questions.

### WHAT DOES THE "✓" MEAN?

A "✓" next to a response in the guide indicates that is the preferred response in terms of **environmental compliance**. If you select a response without a "✓", you may still be in compliance. However, you should verify that you are in compliance by contacting the appropriate federal or state regulatory agency and discussing your activity with them.

**Can the checklist be personalized?** The checklist can be personalized to fit the needs of your shop. When evaluating environmental compliance, the user need only review those shop activities that are on-going at the shop. For example, some repair shops do not replace catalytic converters. If this is the case, the reviewer can skip over the section on converters and move on to the next appropriate section of the checklist.

## WHERE CAN I GET HELP?

After the initial evaluation, you may find the guidebook does not provide all the information you may need to know about the particular regulatory program. There are many sources of information available to you that can provide valuable information on federal and state environmental requirements. Other available sources can provide information on pollution prevention opportunities. The prevention opportunities can assist the shop owner/manager with options to reduce or eliminate waste materials and even save money. Much of this information can be obtained by telephone or accessed through the Internet. Here is a partial list of information sources that can assist you with more detail information.

### EMERGENCY RESPONSE & ASSISTANCE

- National Response Center (NRC) - U.S. Coast Guard Oil & Hazardous Material Spills (800) 424-8802). [www.nrc.uscg.mil/](http://www.nrc.uscg.mil/)
- CHEMTREC operated by the American Chemistry Council (800-424-9300). [www.chemtrec.org/](http://www.chemtrec.org/)
- Local Emergency Number: 911

## Environmental Compliance Information

- CCAR-GreenLink®:  
Toll-free: (888) GRN-LINK (476-5465)  
Website: [www.ccar-greenlink.org](http://www.ccar-greenlink.org)

CCAR is an automotive industry organization whose mission is to augment the professionalism of automotive technicians.

- National Compliance Assistance Clearinghouse  
Website: [www.epa.gov/clearinghouse](http://www.epa.gov/clearinghouse)

This website provides users with a comprehensive source of compliance assistance materials including a single repository of directories to federal, state, local and other compliance assistance providers.

- Air Risk Information Support Center Hotline  
Telephone: (919) 541-0888

This hotline provides technical assistance and information in areas of health, risk, and exposure assessment for toxic and air pollutants.

- RCRA/Underground Storage Tanks (RCRA/UST), Superfund, and Emergency Planning and Community Right-to-Know (EPCRA) Hotline  
Telephone: (800) 424-9346 or (703) 412-9810

This hotline provides information about the hazardous waste program (RCRA), the underground storage tank program (UST), Superfund, and emergency planning and community right-to-know program (EPCRA).

- **Safe Drinking Water Hotline**  
Telephone: (800) 426-4791 or (703) 285-1093  
  
This hotline provides information about EPA's drinking water regulations and underground injection control regulations and other related drinking water and groundwater topics. Technicians are available to get details on legislation and regulations or provide important contacts for water resources and information on drinking water and groundwater.
- **Small Business Ombudsman Clearinghouse/Hotline**  
Telephone: (800) 368-5888 or (703) 305-5938  
  
This hotline provides regulatory and other environmental information concerning small business assistance to enhance voluntary regulatory compliance and pollution abatement and control. It also addresses questions covering all media programs within EPA.
- **Stratospheric Ozone Information Hotline**  
Telephone: (800) 296-1996  
  
This information hotline provides in-depth information on ozone protection regulations and requirements under Title VI of the Clean Air Act Amendments of 1990. In addition, the hotline serves as a distribution center and point of referral for an array of information pertaining to other general aspects of stratospheric ozone protection and depletion.
- **Used Filter Hotline**  
Telephone: (800) 99-FILTER (993-4583)  
Website: [www.filtercouncil.org](http://www.filtercouncil.org)  
  
This hotline, sponsored by the Filter Manufacturers Council, provides commercial generators of used oil filters with a summary of the state's filter management regulations, referrals to companies that provide filter management services, referrals to state agencies, and a brochure entitled "How to Choose a Filter Management Service."

## **EPA Headquarters and Regional Office Information**

- **EPA Headquarters**  
Telephone: (888) 372-8255  
Website: [www.epa.gov](http://www.epa.gov)
- **Region 1 (CT, MA, ME, NH, RI, VT)**  
Telephone: (888) 372-7341  
Website: [www.epa.gov/region1](http://www.epa.gov/region1)
- **Region 2 (NJ, NY, PR, VI)**  
Telephone: (212) 637-5000  
Website: [www.epa.gov/region2](http://www.epa.gov/region2)

- Region 3 (DC, DE, MD, PA, VA, WV)  
Telephone: (800) 438-2474  
Website: [www.epa.gov/region3](http://www.epa.gov/region3)
- Region 4 (AL, FL, GA, KY, MS, NC, SC, TN)  
Telephone: (800) 241-1754  
Website: [www.epa.gov/region4](http://www.epa.gov/region4)
- Region 5 (IL, IN, MI, MN, OH, WI)  
Telephone: (800) 621-8431  
Website: [www.epa.gov/region5](http://www.epa.gov/region5)
- Region 6 (AR, LA, NM, OK, TX)  
Telephone: (800) 887-6063  
Website: [www.epa.gov/region6](http://www.epa.gov/region6)
- Region 7 (IA, KS, MO, NE)  
Telephone: (800) 223-0425  
Website: [www.epa.gov/region7](http://www.epa.gov/region7)
- Region 8 (CO, MT, ND, SD, UT, WY)  
Telephone: (800) 227-8917  
Website: [www.epa.gov/region8](http://www.epa.gov/region8)
- Region 9 (AZ, CA, HI, NV)  
Telephone: (886) 372-9378  
Website: [www.epa.gov/region9](http://www.epa.gov/region9)
- Region 10 (AK, ID, OR, WA)  
Telephone: (800) 424-4372  
Website: [www.epa.gov/region10](http://www.epa.gov/region10)

## **Financial Assistance Information**

- Small Business Improvement Loans  
Website: [www.bankrate.com/](http://www.bankrate.com/) and [www.getsmart.com/](http://www.getsmart.com/)

BankRate.com and GetSmart.com are financial search engines that allow users to compare different loan products from multiple lenders in a single location. The search engines match the borrower's financing preferences with lenders who are pre-screened and ready to fulfill their requests.

## **Pollution Prevention Websites**

Pollution Prevention or P2 can improve a business's bottom line through reduced raw material and energy costs, treatment and disposal expenses, and associated labor costs. Many pollution prevention strategies, such as substituting toxic materials with safer alternatives, are simple and inexpensive.



The potential benefits to an automotive service and repair shop incorporating pollution prevention practices into the shop's everyday activities include:

- **Reduced Regulatory Burden.** Improving environmental performance and reaching performance goals that go beyond compliance are ways to reduce regulatory burdens.
- **Decreased Liability.** Handling hazardous and toxic materials brings high liability should an accident occur. Organizations that substitute toxic materials with safer alternatives reduce the liability and high costs associated with an unsafe environment.
- **Improved Environmental and Health Quality.** P2 methods can help reduce the air, water, and land pollution that results from waste generation, treatment, and disposal, reduce worker and resident health risks and the environmental risks associated with pollutant emissions, and conserve natural resources and landfill space.
- **Increased Productivity and Efficiency.** P2 assessments help organizations identify opportunities to decrease raw material usage, eliminate unnecessary operations, increase throughput, reduce off-spec product generation, and improve yields.
- **Enhanced Public Image.** Consumers more favorably view businesses that adopt and practice P2 strategies, and the marketing of these practices can increase profits.

EPA has created fact sheets and a video to assist you in examining your shop for pollution prevention opportunities. You can call toll-free (800) 490-9198 and ask for *The Pollution Prevention Tool Kit for Auto Repair* (EPA 900-E-99-001) and *Profit Through Prevention: Best Environmental Practices for Auto Repair* (EPA 909-V-99-001)

- *EPA's Pollution Prevention and Information Clearinghouse*  
Website: [www.epa.gov/opptintr/p2home](http://www.epa.gov/opptintr/p2home) and  
[www.epa.gov/oppt/library/ppicindex.htm](http://www.epa.gov/oppt/library/ppicindex.htm)

EPA's pollution prevention (P2) site includes general P2 information and publications, information on P2 in the regulations, the definition of P2 as defined under the Pollution Prevention Act of 1990, and information about voluntary P2 programs. There are also links to EPA and non-EPA P2 sites. The clearinghouse is a free, non-regulatory service that provides telephone reference and referral, document distribution for selected EPA documents, and a special collection available for interlibrary loan.

- *National Pollution Prevention Roundtable Home Page*  
Website: [www.p2.org](http://www.p2.org)

This site provides access to the latest information on legislative and regulatory P2 developments, National Roundtable publications, state P2 program websites, and a directory of industrial P2 publications.

- **Pollution Prevention Cooperatives**

Coordinated with EPA's Enviro\$en\$e program, these cooperatives provide easy access to pollution prevention and cleaner production resources around the Internet.

- U.S. Federal Agency Pollution Prevention Cooperative  
Website: <http://es.epa.gov/cooperative/federal>

- State and Local Government/Business Assistance Cooperative  
Website: <http://es.epa.gov/cooperative/stateandlocal>

- **Region 9 Fleet Auto Reports**

Website: [www.epa.gov/region09/p2/autofleet/](http://www.epa.gov/region09/p2/autofleet/)

This website contains environmental, technical and economic evaluations of the top pollution prevention “fixes” for auto repair and fleet maintenance operations.

## **EPA Small Business and Self-Assessment Policies**

Website: [www.epa.gov/compliance/incentives/programs/index.html](http://www.epa.gov/compliance/incentives/programs/index.html)

This website contains information on how an automotive repair shop might qualify for penalty reductions through self-disclosure.

Website: [www.epa.gov/compliance/incentives/](http://www.epa.gov/compliance/incentives/)

This website contains information on incentives to promote environmental compliance among small businesses (those with 100 or fewer employees) by providing incentives to discover and correct environmental problems.

## CONSOLIDATED SCREENING CHECKLIST FOR AUTOMOTIVE REPAIR FACILITIES

Facility Name:

Site Reviewer:

Facility Location:

Date:

### 1.0 WASTE MANAGEMENT

Hazardous Waste Generation, Storage, and Transport	Does the facility have an EPA hazardous waste generator ID number? (p. 5)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	Does the facility store hazardous waste in appropriate storage containers? (p. 6)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	Does the facility meet all hazardous waste storage (quantity and time) requirements? (p. 6)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	How does the facility manage/dispose of its hazardous waste? (p. 7)	Off-site TSDF / On-site TSDF / Other / NA
	Does the facility have a written contingency plan or basic contingency procedures in place for responding to spills and releases of hazardous wastes? (p. 7)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
Used Oil and Filters	Are used oil containers/tanks and associated piping labeled "used oil?" (p. 9)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	Are used oil containers/tanks and associated piping leak free?" (p. 9)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	Does the facility prevent the mixing of used oil with hazardous waste? (p. 9)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	How does the facility manage/dispose of its used oil? (p. 10)	Sent off-site for recycling / Burned in an On-site space heater / Burned off-site / Other / NA
	How does the facility manage/dispose of used oil filters? (p. 12)	Recycle / Srv. company / Other/NA
Used Antifreeze	How does the facility manage/dispose of used fuel filters? (p. 13)	Recycle /Srv. company/ Managed as hazardous waste /Other / NA
	When stored, does the facility contain, segregate, and label used antifreeze? (p. 14)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
Used Battery Storage and Disposal	Has the facility determined if it generates any antifreeze that is a hazardous waste? (p. 14)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	Does the facility protect used batteries from storm water contact? (p. 16)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
Used Shop Rags/Towels	How does the facility manage/dispose of used batteries? (p. 17)	Return to supplier / Recycle / Srv. company / Sent to hazardous waste landfill / Other / NA
	How does the facility manage/dispose of used shop rags and towels? (p. 18)	Laundry service / Burned for heat /Managed as hazardous waste / Other / NA
Absorbents	Does the facility determine if used absorbents are hazardous before disposal? (p. 20)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
Used Tires	How does the facility manage/dispose of used tires? (p. 21)	Resale/ Retread/ Recycle/ Other/ NA
Brake Repair	Does the facility dispose of spent brake washing solvent as hazardous waste? (p. 22)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	How does the facility manage asbestos brake pads? (p. 22)	Recycled off site / Disposed by vendor / EPA-approved disposal site / Other / NA

### 2.0 WASTEWATER AND STORM WATER MANAGEMENT

Wastewater and Storm Water Management	Can the facility identify the final destination of its wastewaters? (p. 26)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	If the facility discharges to waters of the United States, does it have an NPDES permit? (p.27)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	If discharging to a municipal sanitary sewer, has the facility notified the Publicly-Owned Treatment Works (POTW) and received approval for discharges? (p. 28)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	If discharging to an underground injection control (UIC) well, does the facility comply with UIC program requirements? (p. 28)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	How does the facility manage the sludge from an oil/water separator? (p. 29)	Managed as hazardous waste / Off-site disposal to other facility / On-site disposal / NA

## CONSOLIDATED SCREENING CHECKLIST FOR AUTOMOTIVE REPAIR FACILITIES

### 2.0 WASTEWATER AND STORM WATER MANAGEMENT, CONT.

	Does the facility have a storm water permit? If Yes, does the facility have a storm water pollution prevention plan (SWPPP)? (p. 31)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	Are materials stored outside protected from contact with storm water? (p. 31)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>

### 3.0 AIR POLLUTION CONTROLS AND OTHER REQUIREMENTS

Equipment Cleaning and Spent Solvents	If halogenated solvents are used in cleaning equipment, has the facility submitted a notification report to the air permitting agency? (p. 34)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	How does the facility manage/dispose of spent solvents? (p. 35)	Third-party vendor / Off-site disposal / Storm sewers or surface waters / UIC well / Sanitary sewer / Ground / Other / NA
Fueling/ Gas Stations	Do fuel delivery records indicate compliance with appropriate fuel requirements? (p. 38)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	Does the facility use overfill protection measures, spill containment methods, and spill response equipment during fueling? (p. 39)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
Automotive Painting	Does the facility have air permits? (p. 41)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	How does the facility manage stripped paint chips and baghouse dusts? (p. 42)	Recycle / Municipal or hazardous landfill / Other / NA
	When not in use, does the facility store paints in labeled containers? (p. 43)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	How does the facility manage used paints and paint waste? (p. 43)	Return to supplier / Reuse / Recycle / Other / NA
Motor Vehicle Air Conditioning (MVAC)	Does the facility service and/or retrofit MVACs with alternative refrigerants? (p. 47)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	If Yes, are the alternative refrigerants approved under the Significant New Alternatives Policy (SNAP)? (p. 47)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
Catalytic Converters	Does facility replace CC's that are the correct type based on vehicle requirements? (p. 48)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	Does facility properly mark and keep replaced CC's on-site for at least 15 days? (p. 49)	Y <input type="checkbox"/> N <input type="checkbox"/>
Pesticide Use	Does the facility apply pesticides only as directed by their labels? (p.53)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>

### 4.0 STORAGE TANKS, SPCC, AND EMERGENCY RESPONSE

Underground Storage Tanks	Has the facility notified the State or EPA UST program office of any USTs located on-site? (p. 55)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	Does the facility conduct leak detection for tank and piping of all on-site USTs? (p. 56)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	Do USTs at the facility meet requirements for spill, overfill, and corrosion protection? (p. 57)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
Aboveground Storage Tanks	Does the facility inspect ASTs on a periodic basis for leaks and other hazardous conditions? (p. 59)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
SPCC and Emergency Response	Does the facility's storage tank capacity make it subject to the Oil Pollution regulations? (p. 61)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	Could spilled oil reach waters of the United States or adjoining shorelines? (p. 61)	Y <input type="checkbox"/> N <input type="checkbox"/>

### 5.0 RECORDKEEPING

Recordkeeping	<b>NPDES:</b> Does the facility keep accurate records of monitoring information for the minimum requirement of 3 years? (p. 63)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	<b>Air:</b> Does the facility meet the recordkeeping requirements of its air permit(s)? (p. 64)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	<b>Air:</b> If the facility owns/operates appliances that contain ozone-depleting refrigerants, does the facility maintain all required records? (p. 65)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	<b>RCRA:</b> Does the facility keep copies of its manifests for the 3-year minimum requirement? (p. 65)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	<b>USTs:</b> Does the facility maintain leak-detection records ? (p. 66)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>
	<b>USTs:</b> Does the facility maintain corrosion protection records ? (p. 67)	Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>

## SECTION 1.0 WASTE MANAGEMENT

### 1.1 Hazardous Waste Generation, Storage, and Transport

**NOTE:** The following questions, some of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *hazardous waste generation, storage, and transport* for compliance with environmental requirements:

- a. *Does the facility generate hazardous waste? (p. 4)*
- b. *How much hazardous waste does the facility generate per month? (p. 4)*
- c. ***Does the facility have an EPA hazardous waste generator ID number? (p. 5)***
- d. *Does the facility have hazardous waste manifests or shipping papers on file? (p. 5)*
- e. ***Does the facility store hazardous waste in appropriate storage containers? (p. 6)***
- f. ***Does the facility meet all hazardous waste storage (quantity and time) requirements? (p. 6)***
- g. *How does the facility manage/dispose of its hazardous waste? (p. 7)*
- h. ***Does the facility have a written contingency plan or basic contingency procedures in place for responding to spills and releases of hazardous wastes? (p. 7)***

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a "✓") for environmental compliance.

#### Identifying Hazardous Waste

An automotive repair shop with service and maintenance activities is likely to create hazardous wastes. Therefore, it is important that the facility identify and properly manage hazardous wastes to protect itself, coworkers, others in the community, and the environment. As a waste generator, the repair shop is responsible for hazardous waste management, from generation to final disposal. **A facility can be held liable for any mismanagement of its wastes, even after the wastes leave the facility.** It is important for every facility to know what wastes are created during maintenance and repair and whether they are hazardous wastes or not. Table 1 provides information on typical wastes created in an automotive service and repair shop.

**Table 1. Typical Wastes Generated at Automotive Repair Facilities and Typical Category by Waste Management Method <sup>1</sup>**

Waste Stream	Typical Category If Not Mixed With Other Hazardous Waste	Typical Category If Recycled	Typical Category If Disposed in Landfill and Not Mixed With a Hazardous Waste <sup>2,3</sup>
Used Oil (and Shop Rags for Used Oil)	Used oil	Used oil	Hazardous Waste
Used Oil Filters <sup>4</sup>	Nonhazardous solid waste <b>If No Free Flowing Used Oil</b>	Used oil if not drained	Nonhazardous Solid Waste <b>If No Free Flowing Used Oil</b>
Oil Spill Absorbent Material	Used oil	Used oil	Depends on used oil characterization
Used Transmission Fluid	Used oil	Used oil	Hazardous waste
Used Brake Fluid	Used oil	Used oil	Hazardous waste
Used Antifreeze	Depending on characterization	Depends on characterization	Depends on characterization
Used Solvents	Hazardous waste	Hazardous waste	Hazardous waste
Used Citric Solvents <sup>5</sup>	Nonhazardous solid waste	Nonhazardous solid waste	Nonhazardous solid waste
Used Cleaning Agents and Shop Rags for Parts Cleaning	Depends on characterization of cleaning agent	Depends on characterization of cleaning agent	Depends on characterization of cleaning agent
Shop Rags and Spill Material Used for Chemical Solvent and Gasoline	Hazardous waste	Hazardous waste	Hazardous waste
Spilled or Unused Fuels	Hazardous waste	Hazardous waste	Hazardous waste
Spilled or Unusable Paints and Thinners	Hazardous waste	Hazardous waste	Hazardous waste
Abrasive grit blast media	Depends on material or paint being blasted (e.g., latex vs. lead paint)	Depends on material or paint being blasted	Depends on material or paint being blasted
Batteries (1) Lead acid, Ni/Cd, Ni/Fe (2) Alkaline	(1) If hazardous, universal waste (2) Typically a nonhazardous waste	(1) If hazardous, universal waste (2) Nonhazardous waste	(1) If hazardous, universal waste (2) Typically a nonhazardous waste
Used Tires	Nonhazardous solid waste	Nonhazardous solid waste	Nonhazardous solid waste

1 Disclaimer: This list is not an actual regulatory determination. It is a list that identifies specific materials at automotive facilities and how they could be classified. These restrictions on how the waste may be disposed of may change based on generator status (i.e., CESQG, SQG, or LQG).

2 Municipal landfills are not permitted to accept hazardous waste from SQGs or LQGs; however, they may accept waste from CESQGs.

3 If any solid waste is mixed with a hazardous waste, then the mixture becomes a hazardous waste.

4 Used fuel filters are regulated separately from used oil filters, and are additionally regulated depending on the type of fuel.

5 These solvents are generally considered non-hazardous, but be aware of the contaminants left in the water-based cleaning solution. The solution could fail for lead and/or other solvents.

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## What is Hazardous Waste?

To be considered “hazardous waste,” materials must first meet EPA’s definition of “solid waste.” Solid waste is discarded material, such as garbage, refuse, and sludge, and includes solids, semisolids, liquids, or contained gaseous materials. Solid wastes that meet the following criteria are considered hazardous and subject to hazardous waste regulations under the Resource Conservation and Recovery Act (RCRA):

- **Listed waste.** Wastes are listed as hazardous because they are known to be harmful to human health and the environment when not managed properly, regardless of their concentrations. There are some wastes called “acutely hazardous wastes” that are dangerous even if they are managed properly. An example of acutely hazardous waste are some pesticides that can be fatal to humans even in low doses.

Listed wastes may be found in some spent cleaning solvents. These include:

- Spent halogenated solvents that contain chlorinated compounds
- Spent nonhalogenated solvents that contain xylene, methanol, ethyl ether or methyl isobutyl ketone
- **Characteristic waste.** If your waste does not appear as a “listed” hazardous waste, it still might be considered hazardous if it demonstrates one or more of the following characteristics:
  - **Ignitable:** Ignitable wastes (flashpoint <140° F) can create fire under certain conditions (e.g., temperature, pressure) or are spontaneously combustible (40 CFR 261.21). Examples include used paints, degreasers, oils and solvents.
  - **Corrosive:** Corrosive wastes (pH less than 2 or greater than 12.5) are acids or bases that are capable of corroding metal, such as storage tanks, containers, drums, and barrels (40 CFR 261.22). Examples include rust removers, acid or alkaline cleaning fluids, and battery acid.
  - **Reactive:** Reactive wastes are unstable and explode or produce toxic fumes, gases, and vapors when mixed with water (40 CFR 261.23). Examples include lithium-sulfide batteries and explosives.
  - **Toxic:** Toxic wastes are harmful or fatal when ingested or absorbed, or leach toxic chemicals into the soil or groundwater when disposed of on land (40 CFR 261.24). Examples include wastes that contain high concentrations of heavy metals, such as cadmium, lead, or mercury.

The repair shop can determine if its waste is toxic by having it tested using the **Toxicity Characteristic Leaching Procedure (TCLP)**, or by **process knowledge**. The **TCLP** is designed to replicate the leaching process and other effects that occur when wastes are buried in a typical municipal landfill. If the leachate from the waste contains any of the regulated contaminants at concentrations equal to or greater than the regulatory levels, then the waste exhibits the toxicity characteristic. **Process knowledge** is detailed information on wastes obtained from existing published or documented waste analysis data or studies conducted on

hazardous wastes generated by similar processes. For example, EPA's "listed" hazardous wastes, as discussed above, can be used as process knowledge.

## **Universal Waste Rule**

In 1995, EPA issued the Universal Waste Rule as an amendment to the hazardous waste program to reduce the regulatory burden on businesses by providing an alternative and less stringent set of management standards for certain types of wastes that potentially would be hazardous under the hazardous waste program: (1) batteries (e.g., nickel cadmium, small sealed lead acid) that are spent (i.e., will not be reclaimed or regenerated at a battery recycling/reclamation facility); (2) pesticides that have been suspended or canceled, including those that are part of a voluntary or mandatory recall under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); and (3) mercury thermostats including temperature control devices containing metallic mercury. Check with the state regulatory agency to see if it has adopted the Universal Waste Rule. For more information, check the website: [www.epa.gov/epaoswer/hazwaste/id/univwast.htm](http://www.epa.gov/epaoswer/hazwaste/id/univwast.htm)

### **1.1a Does the facility generate hazardous waste?**

- Yes** Facility has tested or used process knowledge to determine it does generate hazardous waste. See **Table 1** for common hazardous automotive wastes generated by auto repair facilities.
- No** Facility has determined that it does not generate hazardous waste.
- NA / Not determined** Facility has made no determination. **Note: Facility must immediately conduct a waste determination to determine if it is generating a hazardous waste.**

### **1.1b How much hazardous waste does the facility generate per month?**

Generation occurs when a substance becomes a waste. When determining the volume of waste generated, only waste that is in a container or other unit waiting to be disposed of is considered "generated." Thus, solvent stored in a drum waiting for disposal or recycling is "generated," while solvent in a parts washer that is currently in use is not yet a waste and the facility has not generated it.

The facility generates: (Select one)

- No more than 220 lbs (100 kg) of hazardous waste per month. This is approximately ½ of a 55-gallon drum or less of hazardous waste in any month. In this case, the facility is a **conditionally exempt small quantity generator (CESQG)** and an EPA identification (ID) number is not required.
- Between 220 lbs (100 kg) and 2,200 lbs (1,000 kg) of hazardous waste per month. In this case, the facility generates more than ½ of a 55 gallon drum of hazardous waste, but less than 5 (five) 55-gallon drums of hazardous waste in any month. In this case, the facility is a **small quantity generator (SQG)** and must have an EPA ID number.



- Over 2,200 lbs (1,000 kg) of hazardous waste per month. In this case, the facility generates approximately 5 (five) 55-gallon drums or more of hazardous waste in any month. In this case, the facility is a **large quantity generator (LQG)** and must have an EPA ID number.

The total weight of hazardous waste generated includes waste (1) defined as hazardous by EPA regulations, (2) determined to be hazardous by the facility, and (3) not otherwise exempt from counting. For example, used oil that has not been mixed with anything and is destined for recycling does not have to be counted.

Generators who periodically exceed or fall below their normal generation limits in any given calendar month are called **episodic generators**. If the amount of waste generated in a given calendar month causes the generator to become a different type of generator, the generator is responsible for complying with all applicable requirements of that category for all waste generated during that calendar month. For example, if a generator produces 300 kg of hazardous waste in March, that waste is subject to SQG requirements. If the same generator produces 1,500 kg of hazardous waste in April, that waste is subject to LQG requirements.

**1.1c Does the facility have an EPA hazardous waste generator ID number?**

If the facility is an SQG or LQG, federal law requires that it have an EPA hazardous waste generator ID number. This requirement applies even to episodic generators who may fall into the SQG or LQG categories for only one month. This number must appear on all hazardous waste manifests. It is usually placed near the top of the form under the heading, "Generator ID #." The hazardous waste number is an alphanumeric number. The identification number begins with the state postal abbreviation followed by a single letter describing the company's waste activity, (e.g., D=Disposal, T=Transporter, etc.) and nine digits (e.g., NYG123456789). CESQGs are not required to obtain an identification number under federal law. Contact the state or EPA regional office to obtain a copy of EPA form 8700-12 "Notification of Hazardous Waste Activity." For additional help, call the **RCRA/UST, Superfund, EPCRA Hotline** at **(800) 424-9346**.

- Yes** Facility has obtained a hazardous waste ID number from the state regulatory agency or EPA. ✓
- No** Facility has not obtained an hazardous waste ID number.
- NA** Facility is a CESQG. No hazardous waste ID number required.

**1.1d Does the facility have hazardous waste manifests or shipping papers on file?**

For SQGs and LQGs that ship hazardous waste off-site, a Uniform Hazardous Waste Manifest must accompany each hazardous waste shipment. The manifest documents the shipment type, quantity, origin, and destination, and must accompany each hazardous waste shipment. Manifests must be kept for 3 years. Contact the

state regulatory agency for a Uniform Hazardous Waste Manifest form. CESQGs are not required to use manifests.

- Yes** Facility has manifests and/or shipping papers on file for hazardous waste transported. ✓
- No** Facility does not have manifests and/or shipping papers for hazardous waste shipments.
- NA** Facility does not ship hazardous waste off-site.

**1.1e Does the facility store hazardous waste in appropriate storage containers?**

There are requirements an automotive shop must meet if storing hazardous waste in containers (drums):

- Clearly marked with the words “**Hazardous Waste**” and the date when waste is first deposited into the container. Labels for this purpose may be available from the hauler.
- Kept in good condition and stored in a manner that minimizes risks of ruptures, leaks, or corrosion.
- Kept closed except when being filled or emptied, except if volatile explosion is possible and emergency ventilation is needed.
- Inspected at least once per week for leaks or corrosion. Note: Some states may require facilities to keep a written record of these inspections. Any problems should be corrected immediately. If any corrections are made, they should be noted in a permanent record and kept on file for at least 3 years.
- Stored in a manner that minimizes the potential for accidental mixing of incompatible materials.

- Yes** Facility stores waste in containers that meet the above requirements. ✓
- No** Facility stores waste in containers that do not meet the above requirements.
- NA** Facility does not generate hazardous waste.

**1.1f Does the facility meet all hazardous waste storage (quantity and time) requirements?**

A hazardous waste generator can store hazardous waste on-site for a limited time, according to the following requirements:

- **LQGs** may accumulate any amount of hazardous waste for no more than 90 days and then move it to an approved recovery, treatment, storage or disposal site.
  - **SQGs** can accumulate no more than 13,228 lbs (6,000 kg) of hazardous waste on site for up to 180 days without permit (or up to 270 days if the shop must transport the hazardous waste more than 200 miles away for recovery, treatment, or disposal).
  - **CESQGs** have no maximum on-site time limits for storage but cannot accumulate more than 2,200 lbs (1,000 kg) of hazardous wastes or 2.2 lbs (1 kg) of acutely hazardous waste, or 220 lbs (100 kg) of acutely hazardous waste spill residues, at any time.
- Yes** Facility complies with all hazardous waste storage quantity and time requirements. ✓
- No** Facility does not comply with all hazardous waste storage quantity and time requirements.
- NA** Facility does not generate hazardous waste.

**1.1g How does the facility manage/dispose of its hazardous waste?**

- Ships hazardous waste off-site to:**
- A RCRA-permitted treatment, storage or disposal facility (TSDF). ✓
  - A recycling facility. ✓
  - An interim status facility or ✓
  - An exempt facility. ✓
- Disposes of hazardous waste on-site and is a RCRA-permitted TSDF.** ✓
- Other** If the shop is not managing its hazardous waste by one of the above methods, the shop is out of compliance and must comply immediately.
- NA** Facility does not generate hazardous waste.

**1.1h Does the facility have a written contingency plan or basic contingency procedures in place for responding to spills and releases of hazardous wastes?**

If an automotive repair shop is an LQG, it must have a **written contingency plan** that includes the following elements:

- Instructions on what to do in the event of a fire, explosion, or release.
- The arrangements agreed to by local police and fire departments, hospitals, and state and local emergency response teams to provide emergency services.
- The names, addresses, and phone numbers of all persons qualified to act as emergency coordinator.

- Location of all emergency equipment at the facility.
- An evacuation plan.

Although a written contingency plan is not federally required for SQGs or CESQGs, it is strongly recommended.

SQGs are required to have **basic contingency procedures** which include, but not limited to, the following:

- At all times, an emergency coordinator (employee) who is on-call or on-site and is responsible for coordinating all emergency response measures.
- Information posted next to the telephone, including: (1) name and number of the emergency coordinator; (2) locations of the fire extinguishers and spill control material; and (3) telephone number of the fire department.
- Ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures.

It is also important to check with the state and local authorities for any additional contingency plan or emergency preparedness requirements.

- Yes** Facility has a written contingency plan or basic contingency procedures. ✓
- No** Facility does not have a written contingency plan or basic contingency procedures in place.
- NA** Facility is not an SQG or an LQG and is not required to meet RCRA's emergency preparedness requirements.

## **1.2 Used Oil and Filters**

**NOTE:** The following questions, some of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *used oil and filters* for compliance with environmental requirements:

- a. **Are used oil containers/tanks and associated piping leak free and labeled "used oil?"** (p. 9)
- b. **Does the facility prevent the mixing of used oil with hazardous waste?** (p. 9)
- c. **How does the facility manage/dispose of used oil?** (p. 10)
- d. *If the facility transports more than 55 gallons of used oil off site at one time, (1) does it have an EPA ID number, and (2) is it licensed as a used oil transporter?* (p. 10)
- e. *Does the facility completely drain used oil filters and/or used fuel filters before disposal?* (p. 12)
- f. **How does the facility manage/dispose of used oil filters?** (p. 12)
- g. *Does the facility inspect used oil filter storage areas for oil spills and leaks?* (p. 12)
- h. *Has the facility determined if its used fuel filters are hazardous?* (p. 12)
- i. **How does the facility manage/dispose of used fuel filters?** (p. 13)

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

## **Used Oil**

When performing oil changes, auto repair shops should always recycle or reclaim the used oil. Used oils are regulated under the Used Oil Standards, and are typically not classified as hazardous wastes under the federal program. However, some states may have stricter management and disposal requirements. Contact your state regulatory agency to determine the used oil disposal requirements. Facilities should maintain all records on their used oil storage and recycling activities.

### **1.2a Are used oil containers/tanks and associated piping leak free and labeled “used oil”?**

Used oil must be stored in leak free containers and be labeled with the words “**used oil.**” No special labels are necessary, provided that the words “used oil” are visible at all times. Spray painting, crayon, or handwritten (preferably not in pencil) labels are okay. Used motor oil may be mixed with other used oils (hydraulic oils, transmission fluids, brake fluids) and stored in the same container.

Some facilities have pipes that run from the inside of the shop to an to an outside tank or container. Technicians can pour the oil into a funnel or small bucket which is attached to the piping, and the oil goes directly to the tank. In this case, label the funnel/bucket and piping with the words “used oil.”

- Yes** Used oil is in a leak free container(s) labeled with the words “used oil.” ✓
- No** Used oil is not in a leak free container (s) and/or is not labeled “used oil.”
- NA** Facility does not generate used oil.

### **1.2b Does the facility prevent the mixing of used oil with hazardous waste?**

A facility should not mix hazardous waste fluids, such as used solvent, gasoline, or other hazardous substances, with used oil, or the entire volume may be classified as hazardous waste. For example, mixing a “listed” hazardous waste with used oil will result in the used oil becoming a hazardous waste. One may mix used motor oil with other used oils (e.g., transmission fluid or brake fluid) and store them in the same container/tank.

- Yes** Facility prevents the mixing of used oil with hazardous waste. ✓
- No** Facility does not prevent the mixing of used oil with hazardous waste.
- NA** Facility does not generate used oil.

**1.2c How does the facility manage/dispose of its used oil?**

Used oil can be recycled or burned for energy recovery so long as no other wastes are mixed with the oil. Recycling is environmentally protective and energy recovery reduces heating costs during the winter.

Under Used Oil Management Standards, generators can burn used oil as long as:

- The used oil is generated on site.
- Space heaters with maximum heating capacity of 0.5 million BTUs per hour or less are used to burn the used oil.
- The gases from the space heater are vented outside.

- Sent off-site for recycling** Facility has a regular hauler who takes the used oil to a recycling facility. ✓
- Burned in an on-site space heater** Facility burns its used oil in an on-site heater with maximum heating capacity of 0.5 million BTUs used to heat the facility or heat hot water. **Note:** There may be Clean Air Act (CAA) requirements that apply when burning used oil. Contact the state or local air pollution control agency for more information. ✓
- Burned off-site** Facility has a hauler or takes its own oil to a used oil burner. ✓
- Other** Facility does not use any of the methods described above. **Note:** Used oil should not be disposed of in sewers, drains, dumpsters, on the ground, or used as dust suppressants.
- NA** Facility does not generate used oil.

**1.2d If the facility transports more than 55 gallons of used oil off-site at one time, (1) does it have an EPA ID number, and (2) is it licensed as a used oil transporter?**

If the facility transports more than 55 gallons of used oil offsite to an approved used oil collection center, it is required to (1) have an EPA ID number and (2) be licensed as a used oil transporter.

- Yes** Facility has an EPA ID number and is licensed as a used oil transporter. ✓
- No** Facility does not have an EPA ID number, or is not licensed as a transporter.
- NA** Facility does not transport more than 55 gallons of used oil off-site at one time.

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## Used Filters

**Used oil filters** are exempt from federal hazardous waste requirements as long as the filters:

- Are not terne-plated. Terne is an alloy of tin and lead. The lead in the terne-plating makes the filters hazardous.
- Have been properly drained (i.e., hot-drained) of used oil.

According to federal regulations, a facility can dispose of filters as solid waste (in some states) provided that the filter has been **hot-drained** to remove residual used oil. This means that no matter what draining option is used, one should remove the filter from a warm engine and drain it immediately. Four distinct methods of hot-draining can be used:

- Gravity Draining: When the filter is removed from the engine, it should be placed with its gasket side down in a drain pan. If the filter has an anti-drain valve, the “dome end” of the filter should be punctured with a screwdriver (or similar device) so that oil can flow freely. Then allow the filter to drain for 12 to 14 hours.
- Crushing: Crush the filter by using a mechanical, pneumatic, or hydraulic device to squeeze out the used oil/fuel and compact the remaining filter materials.
- Disassembly: Separate the filter into its different parts using a mechanical device. This allows most of the used oil/fuel to drain from the filter, and the metal, rubber, and paper parts of the filter to be recycled separately.
- Air Pressure: Place the filter into a device where air pressure forces the used oil/fuel out of the filter.

Used oil filters storage containers must be protected from wet weather by a cover, either indoors in the shop, or if outdoors, in a shed or lean-to. In addition, make sure the container can hold any used oil that seeps from the filters.

**Used fuel filters** can be drained using the same procedure as used oil filters, then tested to determine if they are hazardous. If the fuel filters are hazardous, they must count toward the facility’s generator status. Store used fuel filters in a separate, marked, fireproof container. If the facility is a CESQG, dispose of used fuel filters in a licensed landfill or give them to a hazardous waste hauler. If the facility is an SQG or LQG, then it must use a hazardous waste hauler with an approved EPA ID number.

**Note:** Disposal requirements for used filters may vary by state, contact you state hazardous waste agency to assure proper disposal. For more information regarding state filter management regulations, referrals to state agencies, and companies that provide filter management services, refer to the **Used Filter Hotline** at **(800) 993-4583**. This hotline is sponsored by the Filter Manufacturers Council.

**1.2e Does the facility completely drain used oil filters and/or used fuel filters before disposal?**

- Yes** Facility completely drains filters (i.e., no visible signs of free-flowing oil remain) prior to disposal. ✓
- No** Facility does not completely drain filters prior to disposal.
- NA** Facility does not generate used oil or fuel filters.

**1.2f How does the facility manage/dispose of used oil filters?**

- Recycle** Filters are recycled for scrap metal. ✓
- Service** Facility contracts with a service which takes filters. ✓
- Trash** Filters are disposed of in the dumpster (e.g., not segregated from other waste such as paper, plastics, food, etc.).
- Other** Method of disposal is not listed above. **Note:** The facility may be out of compliance.
- NA** Facility does not generate used oil filters.

**1.2g Does the facility inspect used oil filter storage areas for oil spills and leaks?**

The automotive repair shop should regularly inspect all areas where oils are received, stored and changed. Use one of the following indicators to identify oil spills: (1) sheen on water, (2) stained soil, (3) lack of vegetation, or (4) visible leaks on the floor. If the shop stores enough oil on-site, there should be a Spill Prevention, Control, and Countermeasures (SPCC) plan available in the event of a spill or leak. The SPCC plan contains detailed information on spill cleanup and remediation. All spills should be contained and cleaned up immediately after detection. Many shops keep absorbent materials close to oil storage and handling locations, in case of an accidental spill.

- Yes** Facility inspects storage areas for oil spills. ✓
- No** Facility does not inspect storage areas for oil spills.
- NA** Facility does not have storage areas for used oil and filters.

**1.2h Has the facility determined if its used fuel filters are hazardous?**

- Yes** Facility has determined through testing or process knowledge if the used fuel filters are hazardous. ✓
- No** Facility has not determined if its used fuel filters are hazardous.
- NA** Facility does not generate used fuel filters.



## 1.2i How does the facility manage/dispose of used fuel filters?

**Note:** If the facility determine the used fuel filters are hazardous waste, they are counted towards the facility's generator status and managed accordingly.

- Recycle**      Used fuel filters are recycled. ✓
- Service**      Facility contracts with a service which takes used fuel filters as they are. ✓
- Managed as hazardous waste**      Facility manages used fuel filters as hazardous waste. ✓
- Trash**      Facility discards filters in the dumpster (e.g., not segregated from other waste such as paper, plastics, food, etc.).
- Other**      Method of disposal is not listed above. **Note:** The facility may be out of compliance. Contact the state regulatory agency for assistance.
- NA**      Facility does not generate used fuel filters.

## 1.3 Used Antifreeze

**NOTE:** The following questions, some of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *used antifreeze* for compliance with environmental requirements:

- a. ***When stored, does the facility contain, segregate, and label used antifreeze? (p. 14)***
- b. ***Has the facility determined if it generates any antifreeze that is a hazardous waste? (p. 14)***
- c. *Does the facility reclaim used antifreeze on-site in a closed loop system? (p.15)*
- d. *If not reclaimed in a closed loop system, how does the facility manage the antifreeze? (p. 15)*

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a "✓") for environmental compliance.

### Used Antifreeze

Automobiles require regular maintenance of their engine cooling system. To minimize releases to the environment, the facility should drain and replace antifreeze in areas where there are no connections to storm drains or municipal sewers. Any spills must be stopped before reaching the shop's floor drains. The auto repair shop should collect and store antifreeze in separate containers and not mix with other fluids.

**1.3a When stored, does the facility contain, segregate, and label used antifreeze?**

**Contained.** Containers are closed (e.g., lids are on, caps are screwed on tight, except when actually adding or removing liquid).

**Segregated.** Used antifreeze is in its own container and not mixed with other liquids.

**Labeled.** Labels or color coding indicates that the container holds only antifreeze. In contrast to used oil, there are no specific labels for antifreeze. To be considered properly labeled, the drum/container/tank should simply have the words “used antifreeze,” or “waste antifreeze,” or “antifreeze only,” or similar wording that distinguishes antifreeze storage from oil and solvent storage. Words can be spray painted, stenciled, crayoned, or more formally labeled.

- Yes**            Used antifreeze is contained, segregated, and labeled. ✓
- No**              Used antifreeze is not contained, segregated, and labeled.
- NA**              Facility does not generate used antifreeze.

**1.3b Has the facility determined if it generates any antifreeze that is a hazardous waste?**

Used antifreeze may be characterized as hazardous waste by testing or by process knowledge.

- If a facility makes the hazardous/nonhazardous determination solely by testing, it must test each batch of antifreeze changed from each vehicle serviced.
- If a facility uses process knowledge, the determination must involve a demonstrated understanding of the potentially hazardous constituents in antifreeze. Such a demonstrated understanding could include a combination of the information on the MSDS for the type of antifreeze used, a referral to a previous test that demonstrated that antifreeze from new vehicles does not contain metals, and/or having a procedure to ensure that any suspect antifreeze is segregated from antifreeze known not to be hazardous.

There are two functional indicators that can assist the shop owner/manager in determining whether the antifreeze is not (or is likely to be) a hazardous waste. First, antifreeze is considered hazardous if it is mixed with a hazardous waste such as cleaning solvents. Second, antifreeze removed from a cooling system that contains lead either within the engine or the cooling (radiator) system likely contains enough lead to characterized the antifreeze as “toxic.”

- Yes**            Facility has determined whether its used antifreeze is hazardous by testing or by process knowledge. ✓

- No** Facility has not determined whether its used antifreeze is hazardous or not.
- NA** Facility does not generate used antifreeze.

**1.3c Does the facility reclaim used antifreeze on-site in a closed loop system?**

To avoid having to manage and dispose of used antifreeze as a hazardous waste, a facility can reclaim used antifreeze in a **closed loop system** that connects directly to the radiator, filters the antifreeze, and returns it directly back into the vehicle. EPA does not consider such reclaimed material to be a solid waste. Thus, even though the antifreeze may be hazardous, it is not a hazardous waste because the antifreeze is returned to its original use as a coolant.

**Non-closed systems** are available that connect to a used antifreeze storage drum. However, because these are not closed loop systems, the antifreeze in the drum may be considered a hazardous waste and must be stored according to the hazardous waste regulations.

- Yes** Facility reclaims used antifreeze in a “closed loop” system. ✓
- No** Facility does not reclaim used antifreeze in a “closed loop” system.
- NA** Facility does not generate used antifreeze.

**1.3d If not reclaimed in a closed loop system, how does the facility manage the antifreeze?**

Antifreeze that is determined not to be a hazardous waste is not counted towards the monthly hazardous waste count. Antifreeze that is hazardous must be managed according to the hazardous waste regulations.

- Recycled on-site** Facility manages used antifreeze accordingly, depending on whether the antifreeze is determined to be a solid waste or hazardous waste. ✓
- Recycled off-site** Facility sends used antifreeze off-site for recycling. ✓
- Landfill** Facility disposes used antifreeze at a landfill. Many landfills accept antifreeze as a separate waste. This does not mean antifreeze deposited in the dumpster with other shop waste.
- Mixed with other fluids** Facility mixes used antifreeze with used oil, solvents or other fluids.
- UIC well** Facility discharges used antifreeze into an underground injection control (UIC) well. The facility should immediately stop this method of disposal!

## 1.4 Used Battery Storage and Disposal

**NOTE:** The following questions, some of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *used battery storage and disposal* for compliance with environmental requirements:

- a. *Has the facility determined whether its batteries are regulated as universal waste or hazardous waste? (p. 16)*
- b. **Does the facility protect used batteries from storm water contact? (p. 16)**
- c. **How does the facility manage/dispose of used batteries? (p. 17)**

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a "✓") for environmental compliance.

### 1.4a **Has the facility determined whether its batteries are regulated as universal waste or hazardous waste?**

There are many types of used batteries with different disposal requirements. Some of these batteries may be classified as hazardous waste.

Under the Universal Waste Rule, batteries that do not exhibit hazardous waste characteristics may be regulated as universal wastes and subject to less stringent requirements than other hazardous wastes. For example, many small sealed lead acid batteries (used for electronic equipment and mobile telephones) and nickel-cadmium batteries are under universal wastes rules. Most alkaline batteries are not hazardous waste under RCRA and can be disposed of as general trash. Check with your local waste authority to see if there is a battery collection program.

- Yes** Facility has completed the waste determination process to determine whether its batteries should be regulated as universal or hazardous waste. ✓
- No** Facility has not determined whether its batteries should be regulated as universal or hazardous waste.
- NA** Facility does not generate used batteries.

### 1.4b **Does the facility protect used batteries from storm water contact?**

When placed out-of-service, the facility should transport batteries to an accumulation area specifically designed for storage prior to removal from the site. The storage accumulation area should protect the batteries from weather and storms. It should be designed (1) with secondary containment to prevent any spillage or leakage from contaminating the soil or surface waters; and (2) without floor drains that could receive spills and deliver them to the storm sewer, sanitary sewer, streams, rivers or other surface water, or into the ground by an injection well. One may store batteries inside or outside under a tarp or roof. Store batteries in a pan or other device so that any

leakage cannot enter floor drains or spill onto the ground. Improper storage results in batteries being considered “abandoned.”

- Yes** Facility protects used batteries from storm water contact. ✓
- No** Facility does not protect used batteries from storm water contact.
- NA** Facility does not store used batteries.

**1.4c How does the facility manage/dispose of used batteries?**

- Return to supplier** Facility returns used batteries to supplier. ✓
- Recycle** Facility sends batteries to a recycling facility. ✓
- Service** Facility pays service company to pick up used batteries. ✓
- Hazardous waste landfill** Facility sends used batteries to a hazardous waste landfill. Facility has records of where and how many batteries were sent. ✓
- Other** Method of disposal is not listed here.
- NA** Facility does not generate used batteries.

**1.5 Used Shop Rags/Towels**

**NOTE:** The following questions, one of which is included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *used shop rags and towels* for compliance with environmental requirements:

- a. **How does the facility manage/dispose of used shop rags and towels? (p. 18)**
- b. *How does the facility store used shop rags and towels on-site? (p. 19)*

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

**Used Shop Rags and Towels**

A facility must manage used shop rags and towels as hazardous waste if they are contaminated with a hazardous waste or display a hazardous characteristic due to the presence of gasoline or metal-contaminated antifreeze. EPA allows facilities to manage these used rags and towels by having them washed through a laundry service, or disposing of them at an approved or “permitted” disposal facility.

A facility can recycle used shop rags and towels contaminated with used oil by burning them for energy recovery under the Used Oil Management Standards existing for burning used oil. According to the used oil regulations, facilities should handle oil-contaminated rags and towels as used oil until the oil is removed from them. EPA considers used oil satisfactorily removed when no visible sign of free flowing oil remains in the rags/towels. **Note:** After used oil has been removed, one may still need to handle the material as a hazardous waste if it contains a hazardous waste or exhibits any property of hazardous waste. Many shops avoid the hazardous waste determination process by sending rags to a laundering facility for washing, rather than disposal.

**Shop Rag/Towel Laundering**  
 Many states do not consider shop rags going to a laundry service to be hazardous waste (although a hazardous waste could be generated by the launderer). Even if shop rags are contaminated with hazardous waste, they are not being discarded. Therefore, the hazardous waste requirements do not apply. Check with your state hazardous waste agency on requirements for managing shop rags/towels.

**1.5a How does the facility manage/dispose of used shop rags and towels?**

- Sent to supplier or Service company**
Facility returns used absorbents to its supplier or pays service company to pick up used absorbents. ✓
- Laundry service**
Facility sends used rags/towels off site to be laundered, often with technicians' uniforms. ✓
- Burned for heat**
Facility mixes used rags/towels with used oil and burns them in a shop space heater with maximum heating capacity 0.5 million BTUs per hour or sends them to a used oil burner. This does not include burning in a barrel simply for disposal. ✓
- Hazardous waste disposal**
Facility mixes used rags/towels with hazardous waste and disposes of them through an EPA-licensed hazardous waste transporter and disposal facility. ✓
- Trash**
Facility disposes of used rags/towels with trash (in a dumpster). **Note:** If rags/towels are contaminated with hazardous waste, the facility should not dispose of them with trash, but manage them according to one of the above options.
- Other**
Method of disposal is not listed.
- NA**
Facility does not generate used rags or shop towels.

### 1.5b How does the facility store used shop rags and towels stored on-site?

- Separate container** Facility stores used rags/shop towels in a container (e.g., bucket, can, barrel, etc.). ✓
- Stored as hazardous waste** Facility stores used rags/shop towels contaminated with hazardous waste according to hazardous waste requirements. ✓
- Shop trash can** Facility disposes used rags/shop towels in a can/dumpster that contains all shop waste, not segregated.
- Floor** Facility places used rags/shop towels on the floor, in a pile, or they are simply scattered.
- NA** Facility does not generate used rags/shop towels.

## 1.6 Absorbents

**NOTE:** The following questions, one of which is included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *absorbents* for compliance with environmental requirements:

- a. *Does the facility use sawdust, soil, or other commercial absorbents for spills or leaks? (p. 19)*
- b. **Does the facility determine if used absorbents are hazardous before disposal? (p. 20)**
- c. *How does the facility manage absorbents used for oil spills? (p. 20)*

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

### 1.6a Does the facility use sawdust, soil, or other commercial absorbents for spills or leaks?

Cleaning up spills and releases of chemicals and petroleum products generally involves the use of materials such as kitty litter type substances (known as “quick dry,” “speedi dry,” or “oil dry”), clay absorbent, pads, pillows, booms, towels, and other such absorbent materials. Sawdust is also sometimes used as an absorbent. A facility must use the proper absorbent for the type of chemical spilled. Once used in a cleanup, dispose of these materials properly.

- Yes** Facility uses one or more of the above substances. ✓
- No** Facility does not use any of the above substances.

**1.6b Does the facility determine if used absorbents are hazardous before disposal?**

Absorbents are considered hazardous waste if: (1) they are contaminated with a hazardous material (e.g., solvents or gasoline), or (2) they are characterized as hazardous by the facility. Although used oil is not considered a hazardous waste if it is recycled, it is a hazardous waste if it is disposed of in a landfill and has hazardous characteristics. Thus, anything that absorbs used oil and is thrown in the trash could be a hazardous waste (if it exhibits a hazardous characteristic), even if it is not mixed with a hazardous waste.

- Yes**                      Facility determines if used absorbents are hazardous before disposal. ✓
- No**                         Facility does not characterize its absorbents.
- NA**                        Facility does not use absorbents.

**1.6c How does the facility manage absorbents used for oil spills?**

- Sent to supplier or service company***                      Facility returns used absorbents to its supplier or pays service company to pick up used absorbents. ✓
- Burned for energy***                      Facility burns absorbents used to soak up used oil for energy recovery in a space heater with maximum heating capacity of 0.5 million BTU per hour. ✓
- Disposed of as hazardous waste***                      Facility places hazardous absorbents in drums labeled as "Hazardous Waste," and disposes of them through a hazardous waste hauler. ✓
- Nonhazardous and landfilled***                      Facility determines that the absorbents are a nonhazardous solid waste and disposes of them with regular trash. ✓
- Other***                                      Method of management is not listed here.
- NA***                                        Facility does not use absorbents.

**1.7 Used Tires**

**NOTE:** The following question, which is included in the accompanying checklist, will help the facility examine its operations relating to *used tires* for compliance with environmental requirements:

- a. How does the facility manage/dispose of used tires? (p. 21)**



In 2001, the United States generated approximately 273 million scrap tires. Historically, these scrap tires took up space in landfills or provided breeding grounds for mosquitoes and rodents when stockpiled or illegally dumped. Fortunately, markets now exist for 76 percent of these scrap tires, up from 17 percent in 1990. Through innovative uses of scrap tires, these markets continue to grow.

### 1.7a How does the facility manage/dispose of used tires?

- Resale** Facility sells used tires. ✓
- Retread** Facility retreads used tires. ✓
- Recycle** Facility recycles used tires. This may include state or local programs that shred tires and then use them for asphalt or other products. ✓
- Other** Facility uses some method other than those listed above for disposal.
- NA** Facility does not generate used tires.

## 1.8 Brake Repair

**NOTE:** The following questions, one of which is included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *brake repair* for compliance with environmental requirements:

- a. **Does the facility dispose of spent brake washing solvent as hazardous waste? (p. 22)**
- b. Does the facility manage used vacuum filters and brake pads as asbestos-containing material waste? (p. 22)
- c. **How does the facility manage asbestos brake pads (p. 22)**

These questions are repeated in the following text, accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

### Brake Repair

EPA does not regulate asbestos in the automotive shop. The Occupational Safety and Health Administrations (OSHA) specifies engineering controls and work practices that must be implemented by the employer during automotive brake and clutch inspection, disassembly, repair, and assembly operations. These work practices include negative pressure/HEPA vacuum, low pressure/wet cleaning method, wet method or other approved method. See [www.osha.gov/SLTC/asbestos/index.html](http://www.osha.gov/SLTC/asbestos/index.html) for more detailed information on handling asbestos-containing brake pads.

**1.8a Does the facility dispose of spent brake washing solvent as hazardous waste?**

Once the automotive shop uses a solvent to clean the brake system, the facility must manage the spent solvent properly. It is likely the solvent will be a hazardous waste because of the flammable characteristic, not the asbestos content. However, the shop must determine if the solvent meets the hazardous waste definition.

- Yes** Facility manages spent solvent as a solid or hazardous waste after making a hazardous waste determination. ✓
- No** Facility has not made a waste determination of the solvent.
- NA** Facility does not generate brake washing solvent.

**1.8b Does the facility manage used vacuum filters as asbestos-containing material waste?**

The facility must collect used filters from the HEPA vacuum as well as the particles in the vacuum and dispose of them as asbestos-containing material waste. Keep the filters wet and seal them in leak-tight wrapping. Label the containers or wrapped packages using warning labels: **DANGER - Asbestos, Avoid Creating Dust, Cancer and Lung Cancer.**

- Yes** Facility collects and manages used vacuum filters as described above. ✓
- No** Facility does not collect and/or manage used vacuum filters as described above.
- NA** Facility does not generate used vacuum filters or brake pads.

**1.8c How does the facility manage asbestos brake pads?**

Recycling and reclamation are the preferred methods for used asbestos brake pads. If asbestos is known or suspected of being present, inform the recycling or reclamation company. If landfilling, make a determination for presence of asbestos prior to disposal. If asbestos is present, use only landfills or disposal sites approved for asbestos.

If the asbestos brake pads are sent to an EPA-approved disposal site, the pads must be in containers, labeled with the name and location of the waste generator. Vehicles used to transport the asbestos must be clearly labeled during loading and unloading. Maintain the waste shipment records so that the asbestos shipment can be tracked.

- Recycled off-site** A manufacturer or a recycling company collects used brake pads for recycling. ✓

- Disposed by vendor**      A vendor disposes of the brake pads by landfilling or other means of disposal.
- Other**      Method of disposal is not listed here.
- NA**      Facility does not generate ACM waste.

## 1.9 Metal Machining

**NOTE:** The following questions, which are not included in the accompanying checklist, will help the facility examine its operations relating to *metal machining* for compliance with environmental requirements:

- a. *Does the facility store scrap metal in a covered and contained area? (p. 23)*
- b. *How does the facility manage metal scraps? (p. 24)*
- c. *How does the facility manage waste cutting oils and degreasing solvents used in its metal machining processes? (p. 24)*

These questions appear in the following text and may be accompanied with a discussion of the preferred answers (indicated with a “✓”) for environmental compliance.

### Metal Machining and Machine Cooling

Machining metal components requires a variety of cutting and lubricating oils and grease to cut and cool the component. The waste metal from the machining operation has economic value and a shop should recycle or reclaim them..

**Tip:** The local scrap metal recycling plant may accept scrap metal if sorted and properly stored.

The wastes associated with metal machining are used cutting oils, spent machine coolant, and degreasing solvents. You will need to make a waste determination of each waste to determine if it is a hazardous waste or not. Any wastes generated from metal machining should be segregated to facilitate reuse and recycling. When collecting and storing scrap metal, protect and cover the materials to prevent the release of pollutants to the ground and storm water. There must be no free liquids present

#### 1.9a Does the facility store scrap metal in a covered and contained area?

Facilities should store metal scraps in a covered and contained area that prevents soil and water contamination.

- Yes**      Facility stores metal scraps in a covered and contained area. ✓
- No**      Facility does not store metal scraps in a covered and contained area.
- NA**      Facility does not have any metal scraps.

**1.9b How does the facility manage metal scraps?**

- Recycle** Facility recycles metal scraps. ✓
- Reuse** Facility reuses metal scraps. ✓
- Sale** Facility collects metal scraps and sells them to metal recyclers. ✓
- Other** Facility does not use one of the methods listed above to manage metal scraps.
- NA** Facility does not have any metal scraps.

**1.9c How does the facility manage waste cutting oils and degreasing solvents used in its metal machining processes?**

- Recycling** Facility recycles waste cutting oils if nonwater-soluble oils must be used. ✓
- Reuse** Facility reuses and recycles solvents whenever possible. ✓
- Disposed of as hazardous waste** Facility separates waste cutting oils and degreasing solvents which are placed in drums, labeled as "Hazardous Waste," and disposes of them by hazardous waste hauler. ✓
- Disposed of in shop drains** Facility pours waste cutting oils and degreasing solvents in shop drains.
- NA** Facility does not conduct metal machining.

## SECTION 2.0 WASTEWATER AND STORM WATER MANAGEMENT

### 2.1 Wastewater Management

**NOTE:** The following questions, some of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *wastewater management* for compliance with environmental requirements.

- a. **Can the facility identify the final destination of its wastewaters?** (p. 26)
- b. *How does the facility manage its wastewaters?* (p. 27)
- c. **If the facility discharges to waters of the United States, does it have an NPDES permit?** (p. 27)
- d. **If discharging to a municipal sanitary sewer, has the facility notified the POTW and received approval for discharges?** (p. 28)
- e. **If discharging to an underground injection control (UIC) well, does the facility comply with UIC program requirements?** (p. 28)
- f. *How does the facility manage the sludge from an oil/water separator?* (p. 29)

These questions appear in the following text, accompanied with discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

### Wastewater and Storm Water Management

Automotive facilities may discharge wastewater and/or storm water from the following activities: repair and maintenance of on-site vehicles, vehicle and equipment cleaning, building and grounds maintenance, chemical storage and handling, fueling of vehicles, and painting and paint removal operations. Facilities that discharge wastewater are required to have a **National Pollutant Discharge Elimination System (NPDES)** permit and/or state permit if the wastewater is collected and discharged off-site through a distinct pipe or ditch “to the waters of the United States.” See Glossary of Terms for the complete definition of “waters of the United States.” EPA or an authorized state issues NPDES permits. For more information regarding commercial activities, review this EPA site: [http://cfpub1.epa.gov/npdes/home.cfm?program\\_id=14](http://cfpub1.epa.gov/npdes/home.cfm?program_id=14)

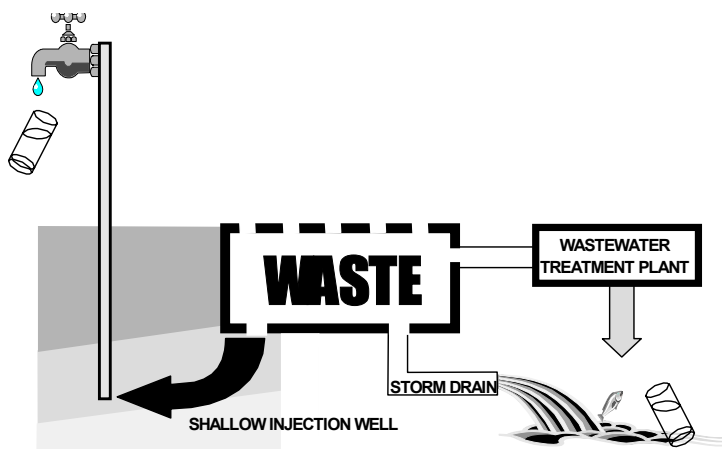
Persons responsible for wastewater discharges requiring an NPDES permit must apply for an individual permit or seek coverage under a general permit (if available) at least 180 days before discharge of wastewater begins. Some states do not allow certain discharges into the environment.

## Discharges to Publicly Owned Treatment Works (POTW)

Publicly owned treatment works are treatment plants that receive and treat wastewater through municipal sanitary sewers prior to discharge to waters of the United States. They may also be referred to as municipal wastewater treatment plants. POTWs may implement a pretreatment program and regulate discharges to the sanitary sewer through prohibitions on certain discharges or limit the amount of the discharge. Automotive shop owners or managers should contact their local POTW to see if any pretreatment requirements or limits apply to them. Although contacting the POTW is not a federal requirement, the facility could be liable if it discharges a significant amount of oil, or other automotive fluids, and those discharges cause the POTW to violate its own NPDES permit.

### 2.1a Can the facility identify the final destination of its wastewaters?

Here is a simple graphic of an automotive repair shop and the possible discharge points that may be located in and around the shop property. Do you know the destination of your shop's wastewaters? Does the interior or exterior drain discharge to:



- A UIC well (shallow injection well) in or near loading docks, storage areas, or service bay areas, that could receive wastes from shop operations. The facility may need a UIC well permit. To determine if your state is authorized to implement the UIC program, check this site: [www.epa.gov/safewater/uic/primacy.html](http://www.epa.gov/safewater/uic/primacy.html)
- A storm water system that empties into the waters of the United States. The facility needs an NPDES permit.
- A publicly owned treatment works. The shop may need to apply for a permit and general pretreatment requirements may apply.
- An interior drain that directs the wastewater to the ground surface, outside the shop. The shop must contact the state agency for applicable permitting requirements.

- Yes** Facility can identify the final destination of all wastewaters (e.g., POTW, underground injection well, waters of the United States). ✓
- No** Facility cannot identify the final destination of its wastewaters.
- NA** Facility does not have drains.

### **2.1b How does the facility manage its wastewater?**

There are several methods a facility can use to manage its wastewater. The “treatment” method most likely to be used at an automotive repair shop prior to discharge wastewater is an oil-water separator. This “treatment” removes oily fluids and grit before the wastewater discharges directly to waters of the United States, or to a sanitary sewer leading to the POTW. Wastewater treatment may be required by an NPDES permit or by the POTW.

- Waters of the United States** Facility discharges effluent directly to waters of the United States, in accordance with NPDES storm water permit. ✓
- Sanitary sewer** Facility discharges to a municipal sanitary sewer or combined sewer with permission of the POTW. ✓
- UIC well** Facility discharges to a UIC well, generally via a floor drain. Although there are some exceptions, as a general rule, discharging industrial wastewater to a UIC well is NOT appropriate.
- Ground** Facility discharges onto the ground. Wastewater may affect groundwater or may flow into storm sewers and surface waterways. **Caution:** Many states forbid the disposal of washwater/rinsewater onto the ground.
- Other** Method of disposal is not listed.
- NA** Facility does not discharge wastewater.

### **2.1c If the facility discharges to waters of the United States, does it have an NPDES permit?**

A facility needs an NPDES permit to discharge industrial wastewater directly into waters of the United States. The wastewater may need treatment on-site to reduce pollutant concentrations to meet the NPDES permit limits. Some states give one NPDES permit which includes both wastewater and storm water discharge requirements while other states give separate permits.

- Yes** Facility has an NPDES permit. ✓
- No** Facility does not have an NPDES permit.
- NA** Facility does not discharge wastewater directly to a body of water.

**2.1d If discharging to a municipal sanitary sewer, has the facility notified the POTW and received approval for discharges?**

Facilities should contact the POTW if any pretreatment requirements apply to them. Although contacting the POTW is not a federal requirement, the facility could be liable if it discharges a significant amount of oil or other material, and that discharge causes the POTW to violate its own NPDES permit.

- Yes**                      Facility has contacted POTW and has received approval for discharges. ✓
- No**                         Facility has not contacted POTW or received approval for discharges.
- NA**                        Facility does not discharge to a POTW.

**2.1e If discharging to a underground injection control (UIC) well, does the facility comply with UIC program requirements?**

Automotive shops that discharge industrial wastewater to underground injection control (UIC) wells must comply with the rules established under the UIC program. Class V wells include shallow non-hazardous industrial waste injection wells, septic systems, and storm water drainage wells. At automotive facilities, the most common injection wells are used to drain clarifier, washrack and storm water to soil below the site, especially in areas where sewer connection is unavailable. Metals, solvents, fuels, and other automotive fluids disposed through these injection wells are likely to violate UIC regulations. Employing dry clean-up methods, waste segregation, and other best management practices may minimize UIC liability. The best protection against UIC liability is to convert to zero-discharge systems for all shop areas, and ensuring no storm water makes contact with motor vehicle fluids.

**Note:** The use of Class V UIC wells for motor vehicle waste disposal, or the disposal of any other hazardous waste, is prohibited. For more information, call the Safe Drinking Water hotline at (800) 426-4791.

Class V UIC wells are authorized by rule provided they do not endanger underground sources of drinking water and meet certain minimum requirements. UIC requirements stipulate that facilities must submit basic inventory information about a Class V well to the EPA or the primacy state agency. In addition, many UIC primacy state programs have additional prohibitions or permitting requirements. However, the fluids released by certain types of Class V wells, particularly motor vehicle and industrial wells, have a high potential to contain elevated concentrations of contaminants that may endanger drinking water, and if found on your property, may be subject to characterization (lab analysis, ground water monitoring) and closure requirements. For more information, review the publication *How The New Motor Vehicle Waste Disposal Well Rule Affects Your Business*. It can be found at:

[www.epa.gov/safewater/uic/smallcompliance.pdf](http://www.epa.gov/safewater/uic/smallcompliance.pdf)

- Yes**                        Facility complies with UIC program requirements. ✓



- No** Facility does not comply with UIC program requirements.
- NA** Facility does not discharge industrial wastewater to UIC wells.

**2.1f How does the facility manage the sludge from an oil/water separator?**

Oil/water separators, which are typically connected to floor drains or wash racks, remove grit and oily materials from wastewater. Oil-water separators require periodic servicing to maintain their performance. Prior to cleaning an oil/water separator, test the contents of the grit chamber and the oily sludge for hazardous constituents. If the sludge exhibits any characteristic of a hazardous waste, the facility must handle it as a hazardous waste. If the sludge is nonhazardous, manage it as used oil.

- Managed as a hazardous waste** Facility disposes hazardous sludge off-site. It is stored, manifested, transported, and disposed of in compliance with all provisions of the hazardous waste program. ✓
- Off-site disposal to other facility** Facility disposes nonhazardous sludge off-site. It is transported, and disposed of at an approved treatment or disposal facility. ✓
- Landfill** Facility improperly landfills its oil/water separator sludge.
- NA** No sludge is produced.

**2.2 Storm Water Management**

**NOTE:** The following questions, one of which is included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *activities relating to storm water management* for compliance with environmental requirements:

- a. *How does the facility manage its storm water? (p. 30)*
- b. **Does the facility have a storm water pollution prevention plan (SWPPP)? (p. 31)**
- c. *Is a certification included in the storm water pollution prevention plan? (p.31)*
- d. **Are materials stored outside protected from contact with storm water? (p. 31)**
- e. *How does the facility clean the floors and surrounding areas? (p.32)*

These questions appear in the following text, accompanied with discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

## **Storm Water Discharges**

Under the Clean Water Act, it is illegal to discharge any pollutants into waters of the United States from a point source unless the discharge is authorized by a National Pollutants Discharge Elimination System (NPDES) permit. The storm water regulations identify eleven major categories that are associated with industrial activity. Facilities that fall under these eleven industrial categories must apply for a NPDES storm water discharge permit. While automotive service and repair shops did not fall into any of the eleven industrial categories, an automotive shop may still need a storm water permit because the shop is located in an “urbanized area.” Urbanized area is defined as having one or more places (central place(s)) and the adjacent densely settled surrounding area (urban fringe) that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile. Contact your state or EPA regional office for more information regarding an NPDES permit for storm water discharge. Additional information on the storm water program can be found at: [http://cfpub1.epa.gov/npdes/home.cfm?program\\_id=6](http://cfpub1.epa.gov/npdes/home.cfm?program_id=6)

### **2.2a How does the facility manage its storm water?**

Storm water (rain, snow) and other forms of water (e.g., washing overspray) are a potential source of wastewater at a facility. Storm water discharges begin when rain or overspray comes in contact with materials left unprotected outdoors. These materials can range from spills left uncleaned, storage containers, or vehicle or mechanical parts. To prevent contact with storm water, store materials on pallets (or something else that keeps them off the ground) and cover them with a tarp or under a roof. Close dumpsters and seal them to the extent that storm water will not enter or exit the dumpster. The pollutants in storm water depend on the type of material(s) the rain comes in contact with prior to discharge. A facility may “treat” storm water using an oil-water separator or some other method of treatment to reduce pollutant concentrations prior to discharge either to waters of the United States, or to a sanitary sewer or combined sewer leading to a POTW. An NPDES permit or the POTW may require wastewater treatment.

- Waters of the United States*** Storm water discharges go directly to waters of the United States, in accordance with NPDES storm water permit. ✓
- Sanitary sewer*** Storm water discharges are directed to a municipal sanitary sewer or combined sewer with permission of the POTW. ✓
- UIC well*** Storm water discharges go to a UIC well (via a floor drain). Although there are some exceptions, as a general rule, discharging industrial wastewater to a UIC well is NOT appropriate.
- Other*** Method of storm water management is not listed.
- NA*** Facility does not discharge wastewater.

**2.2b Does the facility have a storm water pollution prevention plan (SWPPP)?**

If a facility must obtain an NPDES storm water permit, it will likely be required to prepare and implement a storm water pollution prevention plan (SWPPP). Automotive repair shops must develop SWPPPs to prevent storm water from coming in contact with potential contaminants.

- Yes** Facility has an SWPPP. ✓
- No** Facility does not have an SWPPP.
- NA** Facility is not required to have an SWPPP.

**2.2c Is a certification included in the storm water pollution prevention plan?**

Each SWPPP must include a **certification**, signed by an authorized individual, stating that discharges from the site have been tested or evaluated for the presence of non-storm water discharges. The certification must include the following:

- Description of possible significant sources of non-storm water,
- Results of any test and/or evaluation conducted to detect such discharges,
- The test method or evaluation criteria used, the dates of the tests/evaluations, and the on site drainage points directly observed during the test or evaluation.

If certification is not feasible, the storm water pollution prevention plan must describe why (e.g., no access to discharge sites).

- Yes** Facility's SWPPP includes a certification. ✓
- No** Facility's SWPPP does not include a certification, or certification is not feasible and facility has included an explanation in the SWPPP.
- NA** Facility is not required to have an SWPPP.

**2.2d Are materials stored outside protected from contact with storm water?**

- Yes** Facility protects materials from rain/snow or overspray. ✓
- No** Facility does not protect materials from rain/snow or overspray.
- NA** Facility does not store materials outside.

**2.2e How does the facility clean the floors and surrounding areas?**

- Dry Cleanup** Facility uses “dry methods” such as dry mop, broom, rags, absorbents, etc., thus reducing generation of contaminated wastewater. ✓ **Note:** See box below.
  
- Water** Facility uses a hose or wet mop, thus generating wastewater.

**Suggested Dry Cleanup Methods**

**Small Spills:** Use shop towels and then send them to an industrial laundry. Avoid paper towels! If paper towels are used to pick up hazardous waste, they become hazardous waste.

**Medium-Sized Spills:** Use absorbent, portable berms as temporary holding areas to contain a liquid while cleaning. Soak up the liquid and put in containers. Then wipe with a shop towel.

**Oil and Water/Antifreeze Spills:**

1. Use a hydrophobic mop for cleaning up spills containing oil and recycle recovered oil in a mop bucket labeled “waste oil.”
2. Use a regular mop for cleaning up antifreeze and recycle recovered antifreeze in a mop bucket labeled “waste antifreeze.”
3. If there is a slight film on the ground after steps 1 and/or 2, use a shop towel to clean it up. Use an industrial laundry to clean shop towels.
4. Finally, if there is something still on the floor, clean it up with soap and water.

## SECTION 3.0 AIR POLLUTION CONTROLS AND OTHER REQUIREMENTS

### 3.1 Equipment Cleaning and Spent Solvents

**NOTE:** The following questions, some of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *equipment cleaning and spent solvents* for compliance with environmental requirements:

- a. Does the facility clean equipment/parts on-site? (p. 33)
- b. What kind of cleaning agents does the facility use? (p. 34)
- c. Does the facility keep the lids of solvent cleaning equipment closed? (p. 34)
- d. **If halogenated solvents are used in cleaning equipment, has the facility submitted a notification report to the air permitting agency? (p. 34)**
- e. Does the facility store solvents in labeled containers? (p. 35)
- f. **How does the facility manage/dispose of spent solvents? (p. 35)**

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

#### Equipment Cleaning and Spent Solvents

An automotive repair shop may clean various kinds of equipment using solvents. The types of wastes created from equipment cleaning include sludge, wastewater, and the “spent” (used, ready for disposal) cleaning solvents. Auto shops must follow EPA waste management regulations for “waste” or “spent” solvents.

To assist the shop in seeking alternative, less hazardous solvents, review EPA’s *Solvents Alternative Guide* (SAGE) at <http://es.epa.gov/ssds/sagedown.html>. This on-line guide provides pollution prevention information on solvent and process alternatives for parts cleaning and degreasing.

#### 3.1a Does the facility clean equipment/parts on-site?

A typical operation found at most automotive repair facilities involves the cleaning of engine parts, tools, and other small items. The facility may use some type of solvent cleaning equipment, such as a parts washer or a dip tank.

- Yes** Facility does clean equipment, parts, tools or other items.
- No** Facility does not clean equipment, parts, tools or other items.

**3.1b What kind of cleaning agents does the facility use?**

Various cleaning agents can be used for equipment/parts cleaning, including steam, pressurized water, surfactants (soap), and chemical solvents. If the shop uses hazardous chemical solvents, technicians should wear protective safety gear, follow good housekeeping practices, such as, keep labels clean and on the proper containers to avoid misuse and potential injury or contamination, and good ventilation. The facility uses one or more of the following cleaning agents:

- Water
- Steam
- Surfactants
- Chemical solvents
- Other \_\_\_\_\_

**3.1c Does the facility keep the lids of solvent cleaning equipment closed?**

Facilities should keep the lids or covers of solvent cleaning equipment (e.g., parts washers, dip tanks) closed except when actually cleaning parts or adding or removing liquid to prevent evaporation of solvents.

- Yes** Facility keeps lids of solvent cleaning equipment closed. ✓
- No** Facility does not keep lids of solvent cleaning equipment closed.
- NA** Facility does not conduct parts cleaning using solvent cleaning equipment.

**3.1d If halogenated solvents are used in cleaning equipment, has the facility submitted a notification report to the air permitting agency?**

EPA issued national emission standards for hazardous air pollutants (NESHAP) to control toxic air pollutant emissions from solvent cleaning equipment (including dip tanks and parts washers) that use any of six halogenated solvents. These halogenated solvents include:

- Methylene chloride
- Perchloroethylene
- 1,1,1-Trichloroethane
- Trichloroethylene
- Chloroform
- Carbon tetrachloride.

**Tip:** The shop can tell if these chemicals are contained in the solvent by reading the label on the container or reading a Material Safety Data Sheet (MSDS) that accompanies any hazardous material. If the facility does not have an MSDS, one may be requested from its vendor or visit this website - [www.ilpi.com/msds/](http://www.ilpi.com/msds/)

Methylene chloride, trichloroethylene, and 1,1,1- trichloroethane are the three halogenated solvents most likely to be used in auto repair shops.

All owners and operators of solvent cleaning equipment that use these solvents must submit an initial **notification report** to their state or local air quality authority. This report must include information on each solvent cleaning machine and control equipment, and the yearly estimated consumption of each halogenated solvent used. Additional NESHAP requirements depend on the type of solvent cleaning machine (e.g., batch vapor, in-line) that a shop uses. Contact your state or local air quality authority for more information.

- Yes** Facility has submitted a notification report. ✓
- No** Facility has not submitted a notification report.
- NA** Facility does not use halogenated solvents in its equipment cleaning.

**3.1e Does the facility store solvents in labeled containers?**

**Stored in containers.** Containers must be compatible with the substance they are storing, and have no signs of leaks or significant damage due to major dents or rust. Keep containers closed (e.g., lids are on, caps are screwed on tight) except when actually adding or removing liquid.

**Labeled.** Label containers holding spent solvents that are hazardous and those that are transported for disposal. **Note:** Solvents in a parts washer do not need labels.

- Yes** Spent solvents are stored as described above. ✓
- No** Spent solvents are not stored as described above.
- NA** No solvents are used at the facility.

**3.1f How does the facility manage/dispose of spent solvents?**

The automotive shop may use an outside vendor that undertakes the proper handling and disposal of spent solvents. If not, the automotive shop must determine if the spent solvents are hazardous. If they are, do not mix them with nonhazardous wastes such as used oils. All hazardous waste must be stored, manifested, transported and disposed of in compliance with hazardous waste requirements. Only treatment, storage, and disposal facilities should dispose of hazardous waste.

**Do Not Forget the Sludge:** Sludge created from parts cleaning operations may be a hazardous waste. Make a waste determination. If the sludge is determined to be a hazardous waste, it must be managed in accordance with the hazardous waste regulations.

- Third party vendor** Facility uses a third party vendor. Many facilities use third party vendors providing “turn key” assistance. These vendors typically provide the solvents and parts washers,

collect the spent solvents, provide transportation, and recycle or dispose of the waste. ✓

- Off-site disposal** Facility determines spent solvents are a hazardous waste and manages the spent solvents according to the hazardous waste program. ✓
- Storm sewers or surface waters** Facility has obtained an NPDES permit to discharge nonhazardous waste to storm sewers or to surface waters. ✓
- Sanitary sewer** Facility has obtained approval from the POTW to discharge nonhazardous waste to sanitary sewers. Discharge may require pretreatment. ✓
- UIC well** Facility discharges nonhazardous waste to an underground injection control (UIC) well. The facility complies with UIC program requirements. ✓
- Ground** Facility discards spent solvents on the ground which may affect groundwater or may flow with storm water into storm sewers and surface waterways. **Warning:** This practice is unacceptable.
- Other** Method of disposal is not known.
- NA** Facility does not generate spent solvents or sludge.

## 3.2 Fueling/Gas Stations

**NOTE:** The following questions, some of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *fueling* for compliance with environmental requirements:

- a. *Has the facility installed Stage I vapor recovery equipment for unloading of gasoline? (p. 37)*
- b. *Has the facility installed Stage II vapor recovery equipment at the pumps? (p. 37)*
- c. **Do fuel delivery records indicate compliance with appropriate fuel requirements? (p. 38)**
- d. *Has the facility clearly labeled the pumps with the product they contain? (p. 38)*
- e. *Does the facility prevent the use of dyed, high-sulfur diesel/kerosene? (p. 38)*
- f. *Do gasoline pump nozzles comply with 10 gallon per minute flow rate? (p. 39)*
- g. **Does the facility use overflow protection measures, spill containment methods, and spill response equipment during fueling? (p. 39)**



These questions appear in the following text and may be accompanied with a discussion of the preferred answers (indicated with a “✓”) for environmental compliance.

**3.2a Has the facility installed Stage I vapor recovery equipment for loading of gasoline?**

If an automotive repair shop dispenses gasoline and is located ***within an ozone non-attainment area***, Stage I vapor recovery equipment **MUST** be used by the gasoline delivery truck driver while filling the facility’s gasoline storage tanks.

**Tip:** Contact your state or local air pollution control authority to determine if your shop’s fueling operations are regulated (i.e., in an ozone non-attainment area) or check this website: [www.epa.gov/air/oaqps/greenbk/](http://www.epa.gov/air/oaqps/greenbk/)

Stage I vapor recovery equipment captures and controls gasoline vapors which would normally be emitted to the atmosphere during the storage of gasoline, or during the loading and unloading of a gasoline delivery vehicle.

- Yes** Facility ensures that Stage I vapor recovery equipment is used. ✓
- No** Facility knows that Stage I vapor recovery equipment is not used.
- Don’t Know** Facility does not know if Stage I vapor recovery equipment is used.
- NA** Either the facility is not located in an ozone non-attainment area or facility does not dispense gasoline.

**3.2b Has the facility installed Stage II vapor recovery equipment at the pumps?**

If facility dispenses gasoline and is located in a ***serious or above ozone non-attainment area***, it must install Stage II vapor recovery equipment at each nozzle which dispenses gasoline at the facility. Stage II vapor recovery captures the vapors from the automobile gas tank and returns them to the storage tank. Stage II vapor recovery is the “black boot” on the gasoline nozzle and black hose extending to the upper fuel pump canopies at dispensing stations.

- Yes** Facility has installed Stage II equipment. ✓
- No** Facility has not installed Stage II equipment.
- Don’t Know** Facility does not know if it installed Stage II equipment.
- NA** The facility is either not located in a serious or above ozone non-attainment area or does not dispense gasoline.

**3.2c Do fuel delivery records indicate compliance with appropriate fuel requirements?**

Fuel delivery tickets (i.e., product transfer documents) are receipts the facility receives from the fuel deliverer which indicate the type of fuel (e.g., gasoline, diesel, kerosene), how much was received, when it was received, and whether the delivered fuel complies with appropriate fuel requirements.

If the facility is located within an ozone nonattainment area and dispenses gasoline, the fuel delivery ticket **MUST** say “**RFG, certified for use in an ozone nonattainment covered area**” or “**RFG.**” RFG stands for reformulated gasoline.

If the facility is **NOT** located within an ozone nonattainment area, the fuel delivery ticket should say “**CONVENTIONAL GASOLINE. This product does not meet the requirements for reformulated gasoline, and may not be used in any reformulated gasoline covered areas**” or “**CONVENTIONAL.**”

If the facility dispenses diesel fuel to diesel motor vehicles, the fuel delivery ticket **MUST** say “**LOW SULFUR**” or “**LOW SULFUR DIESEL FUEL.**”

- Yes**                      Delivery records indicate compliance with appropriate fuel requirements. ✓
- No**                         Delivery tickets do not indicate compliance with fuel requirements.
- NA**                        Facility does not receive fuel.

**3.2d Has the facility clearly labeled the pumps with the product they contain?**

The facility must label the pumps to indicate a description of the product (e.g., gasoline, diesel, kerosene), product grade (e.g., regular, mid-grade, premium), and octane (e.g., 87 octane) that is being dispensed from the nozzle.

- Yes**                        Facility clearly labels the pumps. ✓
- No**                         Facility does not label pumps.
- NA**                        Facility does not have pumps.

**3.2e Does the facility prevent the use of dyed, high-sulfur diesel/kerosene?**

Most automotive fuel/gas stations will only dispense low sulfur diesel to motor vehicles. The types of diesel motor vehicles include, but are not limited to, diesel tractor trailers, diesel pick-up trucks and diesel automobiles that are licensed and tagged for on-road travel.

In some instances, an automotive fuel/gas station may dispense dyed, high-sulfur fuel. The station must prevent dyed, high-sulfur diesel/kerosene fuel from being dispensed into diesel motor vehicles. The shop can prevent the fueling operation by (1) securing the pump nozzle with lock and key, (2) monitoring pump use, or (3) locating the pump in a place where diesel motor vehicles cannot pull-up and dispense the fuel.

- Yes** Facility prevents dyed, high-sulfur diesel/kerosene fuel from being dispensed into diesel motor vehicles. ✓
- No** Facility does not prevent high-sulfur diesel/kerosene fuel from being dispensed into diesel motor vehicles.
- NA** Facility does not have pumps with dyed, high-sulfur diesel/kerosene fuel.

**3.2f Do gasoline pump nozzles comply with 10 gallon per minute flow rate?**

Every retailer dispensing gasoline must equip each pump from which gasoline or methanol is introduced into vehicles with a nozzle that dispenses fuel at a flow rate not to exceed 10 gallons per minute.

- Yes** Facility has tested the pump nozzles, and they comply. ✓
- No** Facility has tested the pump nozzles, but they do not comply.
- Don't Know** Facility does not know if pump nozzles have been tested.
- NA** Facility does not dispense gasoline or methanol.

**3.2g Does the facility use overfill protection measures, spill containment methods, and spill response equipment during fueling?**

When fueling vehicles, facilities should use overfill protection, spill containment, and spill response equipment to prevent overflows and spills.

- **Overfill protection.** Facilities can prevent fuel overflows during tank filling by installing preventive measures, such as self-locking fuel measures that regularly monitor transfers. In addition, a facility can prevent spills that result from “topping off” tanks by training employees on proper fueling techniques.
- **Spill containment.** Facilities should clean leaks and spills immediately using dry methods such as absorbent wipes.
- **Spill response.** Portable absorbent booms should be readily available for a quick response to spills. Use dry absorbent materials such as kitty litter or organic-based absorbents to absorb oil and grease. Dispose used absorbent properly in accordance with federal and state regulations.

- Yes**            Facility uses the measures, methods, and equipment described above. ✓
- No**              Facility does not use the measures, methods, or equipment described above.
- NA**              Facility does not have fueling operations.

### **3.3 Automotive Painting**

**NOTE:** The following questions, some of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *automotive painting operations* for compliance with environmental requirements:

- a. *Does the facility conduct painting/paint removal operations? (p. 40)*
- b. **Does the facility have air permits? (p. 41)**
- c. *If yes to 3.3b, does the facility meet air permit conditions? (p. 41)*
- d. *Does the facility prepare surfaces to be painted by shot or grit blasting, grinding, or sanding? (p. 41)*
- e. *Does the facility collect paint chips and metal dusts? (p. 41)*
- f. **How does the facility manage stripped paint chips and baghouse dusts? (p. 42)**
- g. *Does the facility use low VOC paints in its painting operations? (p. 42)*
- h. *Does the facility prepare paint (quantity) according to the job? (p. 42)*
- i. *Does the facility take measures to minimize overspray? (p. 43)*
- j. **When not in use, does the facility store paints in labeled containers? (p. 43)**
- k. **How does the facility manage used paints and paint waste? (p. 43)**
- l. *How does the facility dispose of spray paint booth air filters? (p. 44)*

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

#### **3.3a Does the facility conduct painting/paint removal operations?**

The collision repair and paint shop should be painting in appropriate areas within the shop, i.e., paint booths. **Note:** The facility should verify that there are no drains in the areas where painting occurs.

- Yes**            Facility conducts painting/paint removal operations.
- No**              Facility does not conduct painting/paint removal operations.

**3.3b Does the facility have air permits?**

State or local air quality authorities usually issue air pollution permits for certain operations, i.e., automotive painting operations. Check with your state or local air quality authority for applicability and specific requirements.

**Yes** Facility has air permits and they are current. ✓  
Permit No(s): \_\_\_\_\_

**No** Facility has not obtained air permits.

**NA** Permits are not required.

**3.3c If yes to 3.3b, does the facility meet air permit conditions?**

**Yes** Facility is meeting all air permit conditions. ✓

**No** Facility is not meeting air permit conditions.

**NA** Permits are not required.

**3.3d Does the facility prepare vehicle surfaces by shot or grit blasting, grinding, or sanding?**

In preparation for painting, paint/collision repair shops remove old paint from automobiles by shot or grit blasting. Grinding and sanding are often used to prepare the surface to be painted.

**Yes** Facility uses one of the above methods.

**No** Facility does not use one of the above methods.

**NA** Facility is not preparing surfaces for painting at this time.

**3.3e Does the facility collect paint chips and metal dusts?**

An effective practice to assure the optimum collection of paint dusts and chips is to blast and sand within a booth designed with a dust collection control device (e.g., baghouse). Blasting, grinding or sanding operations indoors without dust collection and air pollution controls may expose employees to levels of airborne dust in excess of the OSHA permissible limits for personal exposure to heavy metals, such as lead and cadmium. Conducting operations outdoors allows dust and paint debris to disperse into the environment. Local and state air pollution regulations may not allow this. Check with your state or local air quality authorities.

**Yes** Facility collects paint chips and metal dusts using appropriate equipment. ✓

- No** Facility does not collect paint chips and metal dusts.
- NA** Facility does not conduct paint removal operations.

**3.3f How does the facility manage stripped paint chips and baghouse dusts?**

All materials collected from shot and grit blasting and sanding/grinding operations may be classified as hazardous waste, depending on the previous paint coatings. If the previous paints contained lead or chromium, the waste chips and dusts may be hazardous waste, depending on Toxicity Characteristic Leaching Procedure (TCLP) test results.

- Recycle** Facility recycles materials on-site or ships them to a recycling facility. ✓
- Landfill** Based on waste characterization, facility disposes materials at a municipal or hazardous waste landfill. ✓
- Other** Method of disposal is not listed here.
- NA** Facility does not have these wastes.

**3.3g Does the facility use low VOC paints in its painting operations?**

Paint labels or product data sheets (or material safety data sheets [MSDSs]) should contain the VOC (volatile organic compounds) content of the paint. In general, VOC content greater than or equal to 5 lbs/gallon is high, between 4 and 5 lbs/gallon is low, and below 4 lbs/gallon is very low. In some areas, the automotive paint shop may be restricted to only low VOC paints. Check with your local or state air quality authority.

- Yes** Facility uses paints with VOC content less than 5 lbs/gallon. ✓
- No** Facility uses paints with VOC content of 5 lbs/gallon or higher.
- NA** Facility does not have painting operations.

**3.3h Does the facility prepare paint (quantity) according to the job?**

To minimize leftover paint, the shop should calculate the amount of paint needed for each scheduled job, as opposed to preparing a large quantity of paint. If there is a little paint leftover, the shop might consider giving the leftover to their customer for touch-up.

- Yes** Facility prepares paint by the job. ✓
- No** Facility prepares paints in large batches.
- NA** Facility does not have painting operations.

**3.3i Does the facility take measures to minimize overspray?**

Automotive painting shops can use a variety of application equipment to minimize overspray, i.e., air-assisted; airless, high-volume, low pressure turbine; air atomized electrostatic; and airless, or electrostatic application techniques. Another technique is the use of high transfer efficiency spray applicators. High efficiency sprayers should have a label “HVLP” on the gun. This is not yet a federal regulatory requirement but may be required in your state.

- Yes** Facility takes measures to minimize overspray. ✓
- No** Facility does not take measures to minimize overspray.
- NA** Facility does not have painting operations.

**3.3j When not in use, does the facility store paints in labeled containers?**

When not in use, the automotive shop must ensure that paints are properly contained and labeled. The containers must be closed with tight-fitting lids, and stored so that a spill would not reach a drain or otherwise leave the facility. Container labels must indicate contents.

- Yes** Facility contains and labels paints as described above. ✓
- No** Facility does not contain and/or label paints as described above.
- NA** Facility does not store paints.

**3.3k How does the facility manage used paints and paint waste?**

The automotive paint/collision shop should not bury or discard waste paint cans, residuals, or unused paint products on-site. Organic solvent-based paints and residuals may be hazardous wastes and require manifesting, storage, transportation, and disposal in full compliance with hazardous waste regulations.

Aerosol cans that are empty and depressurized (i.e., all propellant is discharged) may be classified as nonhazardous solid waste for off-site disposal.

- Reuse** Facility gives away leftover paints and thinners to customers, employees, or at “paint swaps.” ✓
- Recycle** Items are recycled by a paint recycler. ✓
- Landfill** Based on waste characterization, facility disposes of paints at a municipal or hazardous waste landfill. ✓
- Mix with other fluids** Facility mixes materials with other fluids (solvent, used oil).

- Drain** Facility pours leftover paint down the drain. **Warning:** This practice must be stopped immediately.
- Other** Method of disposal is not listed here.
- NA** Facility does not generate these wastes.

### 3.31 How does the facility dispose of spray paint booth air filters?

The automotive paint shop must characterize their spray booth air filters. Depending upon the results of the characterization, hazardous or non-hazardous, the shop must dispose the filters accordingly. Filters characterized as non-hazardous can be disposed as a solid waste and into a municipal landfill. Filters characterized as hazardous must be managed as a hazardous waste.

- Dispose as hazardous waste** Facility disposes filters containing hazardous paints as hazardous waste. ✓
- Recycle** Facility sends nonhazardous filters to a recycling facility. ✓
- Landfill** Facility sends nonhazardous filters to a landfill. ✓
- Other** Method of disposal is not listed.
- NA** Facility does not use filters.

## 3.4 Motor Vehicle Air Conditioning (MVAC)

**NOTE:** The following questions, some of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *motor vehicle air conditioning repair* for compliance with environmental requirements:

- a. *Does the facility employ trained and EPA Section 609 certified technicians? (p. 45)*
- b. *Does the facility remove all refrigerant from the MVAC prior to maintenance activities? (p. 46)*
- c. *Has the facility ensured that its CFCs are purchased legally? (p. 46)*
- d. ***Does the facility service and/or retrofit MVACs with alternative refrigerants? (p. 47)***
- e. ***If yes to 3.4d, are the alternative refrigerants approved under the SNAP (Significant New Alternatives Policy)? (p. 47)***
- f. *If yes to 3.4e, does the facility have recovery/recycling equipment certified for that particular refrigerant for each refrigerant removed from the MVAC unit? (p. 47)*
- g. *When retrofitting, does the facility:*
  - A. *Remove all R-12? (p. 47)*



- B. *Install unique service fittings? (p. 47)*
- C. *Affix permanent labels? (p. 47)*
- D. *Install barrier hoses (required for R-22 blends)? (p. 47)*
- E. *Install compressor shut-off switches? (p. 48)*

These questions appear in the following text and are accompanied with a discussion of the preferred answer (indicated with a "✓") for environmental compliance.

## **Air Conditioning Repair**

Since July 1, 1992, it is unlawful for any person maintaining, servicing, repairing, or disposing of any appliance (including MVACs) or industrial refrigeration to knowingly vent, release, or dispose of any ozone-depleting substance [e.g., chlorofluorocarbons (CFCs)] to the environment. In addition, section 609 of the 1990 Clean Air Act Amendments (CAA) required EPA to implement regulations which would limit emissions of ozone depleting substances (ODSs) from motor vehicle air conditioners (MVACs). A technician is subject to the MVAC regulations if he/she receives compensation for servicing, maintaining, or repairing an MVAC. Fact sheets and copies of the regulations can be found at EPA's Stratospheric Ozone Web Site: [www.epa.gov/ozone/title6/609/index.html#factsheets](http://www.epa.gov/ozone/title6/609/index.html#factsheets) or by contacting the **Stratospheric Ozone Information Hotline** at **(800) 296-1996**.

Technicians repairing or servicing motor vehicle air conditioners must use EPA approved recovery and/or recycling equipment. To be approved by EPA, equipment must meet the Society of Automotive Engineers (SAE) standards for approval. Recover-only equipment must meet SAE standard J-2209. Recover/recycle equipment must meet SAE standard J-1991.

Currently, EPA has approved the Electrical Testing Laboratories (ETL) and Underwriters Laboratories (UL) to certify recycling and recovery equipment. Certified equipment are labeled:

"This equipment has been certified by ETL/UL to meet EPA's minimum requirements for recycling and/or recovery equipment intended for use with [appropriate category of appliance--e.g., small appliances, HCFC appliances containing less than 200 pounds of refrigerant, all high-pressure appliances, etc.]."

For a list of approved equipment, review EPA's website at: [www.epa.gov/ozone/title6/609/technicians/appequip.html](http://www.epa.gov/ozone/title6/609/technicians/appequip.html)

Facilities that use recovery equipment must provide documentation that the refrigerant is sent to an EPA-approved reclaimer. A regularly updated list of EPA-certified refrigerant reclaimers is available at <http://www.epa.gov/ozone/title6/608/re-clamation/reclist.html>.

### **3.4a Does the facility employ trained and EPA certified technicians?**

Technicians that service motor vehicle air-conditioning units must be properly trained and EPA Section 609 certified. Each technician must have his or her own certification. Certificates must be kept at the place of business.

**Yes**                      Technicians are certified and a copy available at the shop. ✓

- No** Technicians are not certified, no certificate available at the shop.
- NA** Facility does not service MVAC units.

**3.4b Does the facility remove all refrigerant from the MVAC prior to maintenance activities?**

Before the technician can begin repairing the MVAC unit, all of the refrigerant in the unit must be removed and collected with the use of EPA-certified refrigerant recovery/recycling equipment.

- Yes** Facility removes and collects refrigerant from MVAC prior to maintenance activities. ✓
- No** Facility does not remove or collect refrigerant from MVAC prior to maintenance activities.
- NA** Facility does not service MVAC units.

**3.4c Has the facility ensured that its CFCs are purchased legally?**

**Investigating the source of R-12 and the chain of ownership is the facility's responsibility!**

The automotive shop owner or manager should know the source of the purchased CFCs. Before buying CFCs, the owner or manager should ask the seller for documents of prior ownership of the product and a laboratory analysis of the quality.

**Warning:** If a facility knowingly buys or possesses CFCs smuggled into the United States, it is committing a punishable, criminal offense and could face severe penalties.

If the material is imported, a facility should know when, where, and from whom it was imported. The shop manager should check the containers when they arrive. Illegally imported refrigerant is sometimes packaged in wrong size containers or fixed with improper valves. Remember, if a facility purchases or possesses CFCs that entered the United States illegally, the U.S. Customs Service can confiscate the product. Other potential consequences for purchasing or possessing illegal CFCs include becoming the subject of an investigation by the Customs Service, EPA, and the Internal Revenue Service (IRS). The IRS reviews the incident to determine if there is a failure to pay the tax that is assessed on legally imported CFCs.

- Yes** Facility has ensured that CFCs have been legally purchased. ✓
- No** Facility has not ensured that CFCs have been legally purchased.
- NA** Facility has not purchased CFCs.

**3.4d Does the facility service and/or retrofit Motor Vehicle Air Conditioning (MVAC) with alternative refrigerants?**

Alternative refrigerants may include, but are not limited to: Hot Shot®, Freezone®, HFC-134a, etc.)

- Yes** Facility does service and/or retrofit MVACs with alternative refrigerants.
- No** Facility does not service or retrofit MVACs with alternative refrigerants.

**3.4e If yes to 3.4d, are the alternative refrigerants approved under the Significant New Alternatives Policy (SNAP)?**

In 1994, EPA established the SNAP Program to review alternatives to ozone-depleting substances like CFC-12. Under the authority of the 1990 Clean Air Act, EPA examines new substitutes for their ozone-depleting, global warming, flammability, and toxicity characteristics. EPA has determined that several refrigerants are acceptable for use as CFC-12 replacements in motor vehicle air conditioning systems, subject to certain use conditions. A regularly updated list of SNAP-approved MVAC refrigerants is available at [www.epa.gov/ozone/snap/refrigerants/lists/mvacs.html](http://www.epa.gov/ozone/snap/refrigerants/lists/mvacs.html).

- Yes** Facility only uses alternatives that are SNAP approved. ✓
- No** Facility uses alternatives that are not SNAP approved.

**3.4f If yes to 3.4e, does the facility have recovery/recycling equipment certified for each particular refrigerant removed from the MVAC unit?**

- Yes** Facility has equipment dedicated to each refrigerant removed from a MVAC unit. ✓
- No** Facility does not have equipment dedicated to each refrigerant removed from a MVAC unit.

**3.4g When retrofitting, does the facility:**

- |                                     |   |
|-------------------------------------|---|
| <b>A. Remove all R-12?</b>          | <b>B. Install unique service fittings?</b>                  |
| <input type="checkbox"/> <b>Yes</b> | <input type="checkbox"/> <b>Yes</b>                         |
| <input type="checkbox"/> <b>No</b>  | <input type="checkbox"/> <b>No</b>                          |
| <b>C. Affix permanent labels?</b>   | <b>D. Install barrier hoses (required for R-22 blends)?</b> |
| <input type="checkbox"/> <b>Yes</b> | <input type="checkbox"/> <b>Yes</b>                         |
| <input type="checkbox"/> <b>No</b>  | <input type="checkbox"/> <b>No</b>                          |

**E. Install compressor shut-off switches?**

- Yes**
- No**

### 3.5 Catalytic Converters (CCs)

**NOTE:** The following questions, some of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *catalytic converters* for compliance with environmental requirements:

- a. **Does facility replace CC's that are the correct type based on vehicle requirements? (p. 48)**
- b. Does facility replace CC's on vehicle covered under the vehicle's original manufacturer's warranty? (p. 49)
- c. If yes, was original CC missing due to State inspection program requirement? (p. 49)
- d. **Does facility properly mark and keep replaced CC's on-site for at least 15 days? (p. 49)**
- e. Does facility completely fill out customer paperwork and maintain on-site for at least 6 months? (p. 50)

These questions appear in the following text and are accompanied with a discussion of the preferred answer (indicated with a "✓") for environmental compliance.

**3.5a Does facility replace catalytic converters that are the correct type based on vehicle requirements?**

Replacement catalytic converters must be designed to work on the specific vehicle under repair. Automotive facilities must do one of the following:

(1) routinely check a converter catalog or chart to ensure the correct type of catalytic converters are kept in stock at the shop, or

(2) order converters one at a time as needed from a local parts store and provide the parts store with the vehicle information so that the parts store can send the correct converter for that car.

- Yes**                      The facility does either 1 or 2 listed above. ✓
- No**                         The facility does not do either 1 or 2 listed above.
- NA**                         The facility does not service/replace catalytic converters.  
If **NA** is check, move on to the Asbestos section.

**3.5b Does facility replace catalytic converters on vehicle covered under the vehicle's original manufacturer's warranty?**

Installers are prohibited from installing aftermarket catalytic converters on vehicles still covered under the vehicle manufacturer's emission control warranty. The original catalytic converters on 1994 and older vehicles are covered under the manufacturer's warranty for 5 years or 50,000 miles. Models 1995 and newer are covered for 8 years or 80,000 miles.

- Yes**            The facility does replace converters still under vehicle manufacturer's warranty.
- No**              The facility only replaces converters not covered by vehicle manufacturer's warranty.

**3.5c If yes to 3.5b, was original catalytic converter missing or replaced due to State inspection program requirement?**

- Yes**            The facility installed a converter on a vehicle still covered under manufacturer's warranty that came into the shop with the converter missing or with authorization from the state or local vehicle/ emission inspection program that has determined the existing converter had been lead poisoned, damaged, or otherwise needs replacement. The authorization from the state or local authority should be attached to the work invoice.
- No**              The facility installed an aftermarket catalytic converter on a vehicle still covered under manufacturer's warranty and the vehicle's original converter was still present and the vehicle owner had no authorization from the state or local vehicle/emission inspection program.

**3.5d Does facility properly mark and keep replaced catalytic converters on-site for at least 15 days?**

Used converters removed from vehicles must be kept on-site for a minimum of 15 days. The converter must be marked to indicate from which vehicle the converter was removed. A properly marked converter contains:

1. The work invoice number or date of removal and the customer's name written with a marker, chalk or equivalent marking material; or
2. A copy of the work invoice is attached to the converter.

- Yes**            The marked converter meets either of the marking requirements. ✓
- No**              The converter does not meet either of the required marking requirements.

**3.5e Does facility completely fill out customer paperwork and maintain on-site for at least 6 months?**

- Yes** To receive a “yes” the facility must do all of the following: ✓
- Completely fill out the work invoice and warranty for the replaced catalytic converter. Work invoices must include the following:
    - Customer's name
    - Customer's complete address
    - Vehicle's make, model year, and mileage
    - Reason for replacement (damaged, clogged, missing...);
  - Fill out the catalytic converter manufacturer warranty card completely. Usually the facility will attach a copy of the warranty to the work invoice; and
  - Maintain completed work invoices and warranties on-site for at least 6 months.
- No** Any of the above are not done.

**3.6 Asbestos - Building Renovation/Demolition**

**NOTE:** The following question which is not included in the accompanying checklist, will help the facility examine its operations relating to asbestos renovation and demolition compliance:

- a. *If an automotive shop is renovated or demolished, has the owner notified the local/state air authority and completed a thorough inspection of building? (p. 50)*

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

**3.6a If an automotive shop is renovated or demolished, has the owner notified the local/state air authority and completed a thorough inspection of building?**

There may come a time when the automotive shop owner/manager or corporation wants to renovate the current shop to improve its functionality by adding new equipment and floor space. If a renovation or demolition of the building will be undertaken to make way for a larger automotive repair shop, the owner and/or operator must make a thorough inspection of the building for asbestos before any renovation or demolition can begin. Depending upon the inspection results, the owner and/or operator of the building must notify their local or state air quality authority that asbestos abatement or demolition will occur at the site.

If the asbestos located in the shop will be stripped, removed, dislodged, cut, drilled or similarity disturbed and the total amount equals or exceeds 260 linear feet on pipes, 160 square feet on other shop components (e.g., shop walls) or 35 cubic feet from

facility components for which the area could not be previously measured, the renovation or demolition must follow the Clean Air Act's Asbestos NESHAP regulations.

In addition to the notification and inspection requirements, there are requirements for proper removal, transport and disposal. In addition, OSHA requirements will apply. Do not attempt this yourself! Contract with a licensed asbestos abatement contractor.

- Yes**            Facility has notified state/local air quality program office and completed a thorough inspection of the shop before beginning renovation/demolition activities involving asbestos. ✓
- No**             Facility has **not** notified state/local air quality program office nor completed a thorough inspection of the shop before beginning renovation/demolition activities involving asbestos.
- NA**             No renovation or demolition activity planned or in-progress.

### **3.7 Construction Activities**

**NOTE:** The following questions, which are not included in the accompanying checklist, will help the facility examine its operations relating to *construction activities* for compliance with environmental requirements:

- a. Are there any endangered species which may be affected by construction activities? (p. 51)
- b. Has the facility obtained a Section 404 permit for any projects that may impact wetlands? (p. 52)

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a "✓") for environmental compliance.

If a shop owner or corporation is planning to construct a new automotive shop or expand to meet customer demand, there are additional environmental regulations the builder must be aware of and comply with should the construction activity impact the surrounding environment.

#### **3.7a Are there any endangered species which may be affected by construction activities?**

The Endangered Species Act (ESA) establishes a program for the conservation of endangered and threatened species and the habitats in which they are found. The ESA prohibits the taking, possession, import, export, sale, and transport of any listed fish or wildlife species. The term "taking" includes harassing, harming, hunting, killing, capturing, and collecting. An individual may, by permit, be allowed an incidental taking to an otherwise lawful activity if the applicant submits, and the U.S. Fish & Wildlife Service approves, a conservation plan addressing the impact of the taking, mitigation measures, funding, and alternative actions considered.

Many construction-related activities have been identified as contributing to habitat loss, which can cause the acts that are prohibited under the ESA. Persons engaged in, or planning to engage in, construction activities must be aware if any endangered or threatened species exist on the property involved, or the property is considered part of a listed species' critical habitat. If neither is the case, the ESA does not apply. However, if the action will "take" or degrade critical habitat, some form of mitigating action must be taken to prevent harming the species. There are some exceptions under the ESA and the local U.S. Fish & Wildlife Service should always be consulted in cases where species are present. For more information on the ESA, access USFWS's website at <http://endangered.fws.gov/>.

- Yes**            The land owner has identified endangered species present at the site of construction activities and has determined what impact construction activities will have on them, or facility has determined that no endangered species are present. ✓
- No**             The land owner has not determined whether endangered species are present.
- NA**             No construction activities planned or in-progress.

**3.7b Has the facility obtained a Section 404 permit for any projects that may impact wetlands?**

Construction activities that include dredging and filling of wetlands may require the facility to obtain a Clean Water Act Section 404 permit from EPA and U.S. Army Corps of Engineers. The facility should identify any wetlands potentially impacted by construction activities, consult with their state wetlands or EPA regional wetlands coordinator. For more information, call the **Wetlands Information Hotline** at **(800) 832-7828**.

- Yes**            Facility has identified wetlands and taken steps to obtain a Section 404 permit as necessary. ✓
- No**             Facility is conducting construction activities that would impact wetlands but has not obtained a Section 404 permit.
- NA**             Facility is not conducting any construction activities that could impact wetlands.

**3.8 Pesticide Use**

**NOTE:** The following questions, one which is included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *pesticide use* for compliance with environmental requirements:

- a. **Does the facility apply pesticides only as directed by their labels? (p. 53)**
- b. Are restricted use pesticides (RUPs) applied only by a certified commercial applicator? (p. 53)



These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a "✓") for environmental compliance.

## **Pesticides**

A pesticide is any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest. Though usually thought of as insecticides, the term pesticide also applies to herbicides, fungicides, rodenticides, disinfectants and antimicrobials. Common items that can be found in automotive repair shops include:

- Cockroach sprays and baits
- Insect repellents
- Rat and other rodent poisons
- Restroom disinfectants and sanitizers that kill mold, mildew and germs
- Lawn and garden products, such as weed killers

Under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA registers all pesticides used in the United States. Registered pesticides are required to be properly labeled and if used in accordance with the label, they will not cause unreasonable harm to the environment. Pesticides may only be applied in a manner consistent with the label. Do not repackage! Store in original containers, and keep them out of reach of children.

Pesticides are classified as non-restricted use or restricted use. Anyone can apply a non-restricted use pesticide. Only certified applicators or someone under the direct supervision of a certified applicator can purchase and apply restricted use pesticides (RUPs). Pesticide labels will state whether a particular pesticide is classified as restricted use only. For a list of state FIFRA/Pesticide contacts, refer to the Association of American Pest Control Officials. Their website is located at <http://aapco.ceris.purdue.edu/>

### **3.8a Does the facility apply pesticides only as directed by their labels?**

- Yes** Facility applies all pesticides in accordance with the directions on the labels. ✓
- No** Facility does not apply pesticides as directed by labels.
- NA** Facility does not use any pesticides.

### **3.8b Are restricted use pesticides (RUPs) applied only by a certified commercial applicator?**

Only a certified applicator or someone under the direct supervision of a certified applicator can apply restricted use pesticides. States oversee the program for certification of commercial (and private) applicators of restricted use pesticides. The shop manager should ensure that all vendors and employees applying restricted use pesticides are properly certified.

- Yes** Facility uses certified applicators to apply RUPs. ✓

- No** Facility does not use certified applicators to apply RUPs.
- NA** Facility does not apply RUPs.

### **3.9 PCB-Containing Equipment**

**NOTE:** The following question, which is not included in the accompanying checklist, will help the facility examine its operations relating to *PCB-containing fluorescent light fixtures* for compliance with environmental requirements:

- a. *Has the facility inspected fluorescent light fixtures for possible PCB containing ballasts? (p. 54)*

These questions appear in the following text and are accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

#### **PCB-Containing Equipment**

Electrical equipment, such as electrical light ballasts, transformers, and capacitors, containing insulating or dielectric oils, may contain polychlorinated biphenyls (PCBs). For automotive shops, the biggest concern about PCBs are those located in fluorescent light ballasts. As part of your shop review, examine each fluorescent lighting ballast for appropriate markings. Ballasts manufactured between July 1, 1979 and July 1, 1998 were required to be marked “No PCBs.” It is acceptable to treat these ballasts as unregulated.

If there is no label with “No PCBs,” there are two options the shop manager can consider. First, you could assume that the ballast contains PCBs at 50 ppm or greater and dispose of the ballast as PCB bulk product waste. Alternatively, you could conduct a survey of the manufacturer and type of ballasts in use in the building and develop a random sampling plan for each manufacturer and type of ballast found and analyze the samples for PCBs. However, regardless of the results of the survey, you are responsible for the proper disposal of each ballast. For more assistance on the appropriate disposal of ballasts, review this Question & Answer document:

[www.epa.gov/pcb/qacombined.pdf](http://www.epa.gov/pcb/qacombined.pdf)

#### **3.9a Has the facility inspected fluorescent light fixtures for possible PCB containing ballasts?**

- Yes** Facility has inspected fluorescent light fixtures for PCBs.
- No** Facility has not inspected fluorescent light fixtures for PCBs.
- Don't Know** Facility has assessed fluorescent light fixtures for their potential to contain PCBs, and is unsure.

## SECTION 4.0 STORAGE TANKS, SPCC, AND EMERGENCY RESPONSE

### 4.1 Underground Storage Tanks (USTs)

**NOTE:** The following questions, all of which are included in the accompanying checklist, will help the facility examine its operations relating to *underground storage tanks (USTs)* for compliance with environmental requirements:

- a. ***Has the facility notified the state or EPA UST program office of any USTs located on-site? (p. 55)***
- b. ***Does the facility conduct leak detection for tank and piping of all on-site USTs? (p. 56)***
- c. ***Do USTs at the facility meet requirements for spill, overfill, and corrosion protection? (p. 57)***

These questions appear below and are accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

#### Underground Storage Tanks

Many automotive shops supply fuel for automobiles and other vehicles. They range from the local repair shop to the gas ‘n go shops that sell just fuel and provide no other automotive service. In addition, auto repair shops may keep used oil or fuel for emergency generators in underground tanks. These petroleum fluids are stored in **underground storage tanks (USTs)** which is defined as a tank, and any underground piping connected to the tank, that has at least ten percent of its combined volume underground, and is greater than 110 gallons in capacity.

To protect human health and the environment from dangerous releases, USTs must have leak detection and spill, overfill, and corrosion protection. Other UST requirements address notification, installation, corrective action, financial responsibility, and recordkeeping. For more information on USTs, visit EPA’s Office of Underground Storage Tanks website at [www.epa.gov/oust](http://www.epa.gov/oust).

#### 4.1a **Has the facility notified the State or EPA UST program office of any USTs located on-site?**

Facilities with on-site regulated UST systems must submit a notification form to the responsible state (or EPA if you are located on Indian Lands) Underground Storage Tank (UST) program. The form includes certification of compliance with federal requirements for installation, corrosion protection, release detection, and financial responsibility for UST systems installed after December 22, 1988. For more information on how to obtain and complete the form, call EPA’s **UST Hotline at (800) 424-9346**. The notification form is available at: [www.epa.gov/oust/fedlaws/cfr.htm#ustform](http://www.epa.gov/oust/fedlaws/cfr.htm#ustform).

- Yes** Facility has submitted a notification form to the responsible State or EPA UST program office. ✓
- No** Facility has not submitted a notification form to the responsible State or EPA UST program office.
- NA** Facility has no USTs.

**4.1b Does the facility conduct leak detection for tanks and piping of all on-site USTs?**

Facilities with federally regulated UST systems must conduct leak detection. The **monthly monitoring methods** that may be used to conduct leak detection of tanks include the following:

- Automatic tank gauging: This method uses automated processes to monitor product level and inventory control in the tank.
- Statistical inventory reconciliation: A trained professional conducts a statistical analysis of inventory, delivery and dispensing data, which the facility must provide on a regular basis.
- Secondary containment and interstitial monitoring: This method monitors interstitial space between containment barriers (for example, a double walled tank).
- Vapor Monitoring: This method samples vapors in the soil surrounding the UST. Leaked petroleum produces vapors that can be detected in the soil gas.
- Groundwater monitoring: This method monitors the groundwater table near an UST for the presence of released product into the water table.
- Other methods approved by the regulatory authority.

Note: Facilities with USTs may use inventory control and tank tightness testing instead of one of the monthly monitoring methods for a maximum of 10 years after the tank is installed or upgraded with corrosion protection.

In addition, any pressurized piping must have: (1) monthly monitoring (as described above) or annual line testing, and (2) an automatic flow restrictor, an automatic shutoff device, or a continuous alarm system installed. Check with your State or EPA UST program office to determine which leak detection methods are acceptable in your state.

- Yes** Facility conducts at least one leak detection method for tanks and pipes as described above. ✓
- No** Facility does not conduct leak detection.
- NA** Facility does not have any federally regulated USTs.

**4.1c Do USTs at the facility meet requirements for spill, overfill, and corrosion protection?**

**Spill Prevention:**

Many releases at UST sites come from spills made during delivery. Spills usually result from human error and can be avoided if everyone involved in the fuel delivery follows industry standard practices for tank filling. USTs must also have catchment basins to contain small spills. Basically, a catchment basin is a bucket sealed around the fill pipe.

**Overfill:**

When delivery drivers or UST owners make fuel delivery mistakes, a tank can be overfilled quickly and large volumes can be released at the fill pipe and through loose fittings on the top of the tank or a loose vent pipe. Overfills usually result from human error and can be avoided if everyone involved in the fuel delivery follows industry standard practices for tank filling. USTs must have overfill protection devices when they are installed. The three main types of overfill protection devices are:

- Automatic shutoff devices,
- Overfill alarms, and
- Ball float valves.

**Corrosion Protection:**

Unprotected underground metal components of the UST system can corrode and release product through corrosion holes. Corrosion can begin as pitting on the metal surface. As the pitting becomes deeper, holes may develop. Even a small corrosion hole can leak hundreds of gallons of petroleum into the surrounding environment over a year. In addition to tanks and piping, metal components can include flexible connectors, swing joints, and turbines. All metal UST system components that are in contact with the ground and routinely contain product must be protected from corrosion. All USTs installed after December 22, 1988 must meet one of the following performance standards for corrosion protection:

- Tank and piping completely made of noncorrodible material, such as fiberglass-reinforced plastic.
- Tank and piping made of steel having a corrosion resistant coating AND having cathodic protection.
- Tank made of steel clad with a thick layer of noncorrodible material (this option does not apply to piping).
- Tank and piping are installed without additional corrosion protection measures provided that a corrosion expert has determined that the site is not corrosive enough to cause it to have a release due to corrosion during its operating life and owners/operators maintain records that demonstrate compliance with this requirement.
- Tank and piping construction and corrosion protection are determined by the implementing agency to be designed to prevent the release or threatened

release of any stored regulated substance in a manner that is no less protective of human health and the environment than the options listed above.

- Yes** Facility has spill, overflow, and corrosion protection devices. ✓
- No** Facility does not have protection devices installed.
- NA** Facility does not have any federally regulated USTs.

## **4.2 Aboveground Storage Tanks (ASTs)**

NOTE: The following questions, one of which is included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *aboveground storage tanks (ASTs)* for compliance with environmental requirements:

- a. *Does the facility have aboveground storage tanks (ASTs)? (p. 58)*
- b. *Do ASTs meet or exceed NFPA 30A requirements? (p. 58)*
- c. ***Does the facility inspect ASTs on a periodic basis for leaks and other hazardous conditions? (p. 59)***

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

### **4.2a Does the facility have aboveground storage tanks (ASTs)?**

- Yes** Facility has aboveground storage tanks.
- No** Facility does not have aboveground storage tanks.

### **4.2b Do ASTs meet or exceed NFPA 30A requirements?**

For facilities with fleet vehicle service stations, all ASTs must meet the National Fire Protection Association (NFPA) requirements under *NFPA 30A Automotive and Marine Service Station Code* and *NFPA 30 Flammable and Combustible Liquids Code*. NFPA defines a fleet vehicle service station as a “portion of a commercial, industrial, governmental, or manufacturing property where liquids used as fuels are stored and dispensed into the fuel tanks of motor vehicles that are used in connection with such businesses...”

*NFPA 30A Automotive and Marine Service Station Code* requirements address the following:

- Tank location and capacity
- Control of spillage
- Vaults
- Fire-resistant tanks
- Piping and ancillary equipment
- Physical protection
- Corrosion protection
- Tank filling operations.

Requirements under *NFPA 30 Flammable and Combustible Liquids Code* include the following:

- **Tanks**
  - Design and construction
  - Installation
  - Storage tank buildings
  - Supports, foundations, and anchorage for all tank locations
  - Operating instructions
  - Sources of ignition
  - Testing and maintenance
  - Fire protection and
  - Prevention of overfilling of tanks
  - Leak detection and inventory records for underground storage tanks.
  
- **Piping systems**
  - Materials for piping, valves, and fittings
  - Pipe joints
  - Supports
  - Protection against corrosion
  - Underground piping
  - Valves
  - Testing
  - Identification.

**Note:** For more information call **NFPA** at **(617) 770-3000** or access their website at [www.nfpa.org](http://www.nfpa.org).

- Yes**            Tanks meet or exceed NFPA requirements. ✓
- No**             Tanks do not meet NFPA requirements.
- NA**             Facility does not have ASTs.

**4.2c    Does the facility inspect ASTs on a periodic basis for leaks and other hazardous conditions?**

If regulated under the SPCC program, facilities must inspect ASTs on a periodic basis for evidence of leaks or other hazardous conditions (e.g., rust, structural deterioration, etc.) See Section 4.3 for additional information.

- Yes**            Facility inspects ASTs on a periodic basis. ✓
- No**             Facility does not inspect ASTs on a periodic basis.
- NA**             Facility does not have aboveground storage tanks, or ASTs are not subject to SPCC requirements.

## 4.3 Spill Prevention, Control, and Countermeasures (SPCC) and Emergency Response

**NOTE:** The following questions, some of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *SPCC and emergency response* for compliance with environmental requirements:

- a. **Does the facility's storage tank capacity make it subject to the Oil Pollution regulations? (p. 61)**
- b. **Could spilled oil reach waters of the United States or adjoining shorelines? (p. 61)**
- c. *Does the facility have a Spill Prevention, Control, and Countermeasures (SPCC) plan signed by a Professional Engineer? (p. 61)*
- d. *Is the phone number for the National Response Center posted on site for immediate reporting of oil spills? (p. 62)*

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a "✓") for environmental compliance.

### Spill Prevention, Control, and Countermeasures Program

In 1973, the Oil Pollution Act regulations were created to address the oil spill prevention provisions contained in the Clean Water Act of 1972. The regulation forms the basis of EPA's oil spill prevention, control, and countermeasures (SPCC) program, which seeks to prevent oil spills from certain above ground storage tanks (ASTs) and underground storage tanks (USTs). In particular, the regulation applies to facilities that:

- Have an aboveground storage capacity of more than 660 gallons in a single AST or more than 1,320 gallons in multiple ASTs, or a total underground storage capacity of 42,000 gallons; and
- Has physical potential to discharge oil in harmful quantities into navigable waters of the United States.

On July 17, 2002, EPA issued updated SPCC program requirements. The capacity limits were amended to reduce the program coverage to smaller facilities. To be subject to the amended SPCC requirements, a facility must meet one of the following conditions:

- Have an above ground storage capacity of 1,320 gallons or greater. To be counted in the 1,320 gallons, the oil must be in storage vessels or drums-55 gallons or larger. To be subject to this regulation, an automotive repair shop must store more than 24-55 gallon drums with oil on-site.
- Have a completely buried underground storage capacity greater than 42,000 gallons and is not subject to either federal or state underground storage tank requirements.

Most automotive shops that dispense gasoline or keep used oil on their sites for energy recovery should benefit from this amended rule. Since the shop's fuel tanks are buried underground, are



subject to either the federal or state underground storage tank program and below the underground storage capacity of 42,000 gallon, most automotive shops that dispense fuel will not be subject to the SPCC program. Check [www.epa.gov/oilspill/spccguid.htm](http://www.epa.gov/oilspill/spccguid.htm) for more information.

**4.3a Does the facility's storage tank capacity make it subject to the Oil Pollution regulations?**

If the automotive shop stores oil that exceeds the regulatory capacity of 1,320 gallons or greater in aboveground storage vessels or has a completely buried underground storage capacity greater than 42,000 gallons and is not subject to either federal or state underground storage tank requirements, the shop needs to complete a SPCC plan.

- Yes** Facility exceeds capacity limits indicated above.
- No** Facility storage capacity is less than limits above.
- NA** Facility does not have storage tanks.

**4.3b Could spilled oil reach waters of the United States or adjoining shorelines?**

The determination is based solely on a consideration of geographic and location aspects of the facility. The location of the facility must be considered in relation to streams, ponds, ditches (perennial or intermittent), storm or sanitary sewers, wetlands, mudflats, sandflats or other waters of the United States. The distance to waters of the United States, volume of product stored, worse case weather conditions, drainage patterns, land contours, soil conditions, etc. must be taken into account. This determination **may not** include considerations of man-made features, such as, dikes, equipment or other structures that may hinder, restrain, contain or prevent an oil discharge.

- Yes** The determination indicates a spill can reach waters of the United States or adjoining shorelines.
- No** The determination indicates a spill can not reach waters of the United States or adjoining shorelines.
- NA** Facility does not have storage tanks.

If you responded "Yes" to Questions 4.3a and 4.3b, you must have a Spill Prevention, Control and Countermeasures Plan in place for your automotive shop.

**4.3c Does the facility have a Spill Prevention, Control, and Countermeasures (SPCC) plan signed by a Professional Engineer?**

The SPCC plan must be on-site if the facility is normally manned for at least eight hours per day. Otherwise, it must be kept at the nearest field office. An SPCC plan is a written description of how a facility's operations comply with the prevention

## ***Storage Tanks, SPCC and Emergency Response***

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guidelines under the Oil Pollution Prevention regulation. Each SPCC plan, while unique to the facility it covers, must include certain elements to ensure compliance with the regulations. These elements include:

- Written descriptions of any spills occurring within the past year, corrective actions taken, and plans for preventing their recurrence.
- A prediction of the direction, rate of flow, and total quantity of oil that could be discharged where experience indicates a potential equipment failure.
- A description of secondary containment and/or diversionary structures or equipment to prevent discharged oil from reaching navigable waters.
- If containment and/or diversionary equipment or structures are not practical, a strong oil spill contingency plan and a written commitment of manpower, equipment, and materials to quickly control and remove spilled oil.
- A complete discussion of the spill prevention and control measures applicable to the facility and/or its operations.

Facilities must have an SPCC plan that has been signed by a professional engineer. This is not the same as a “hazardous materials plan,” or an “emergency response plan.” However, some facilities may combine the SPCC plan with another plan. If this is done, the plan should include wording such as “spill control and emergency response plan.” For more information refer to EPA’s website at:

[www.epa.gov/oilspill/spcc.htm](http://www.epa.gov/oilspill/spcc.htm)

- Yes**            The facility has an SPCC that has been signed by a professional engineer. ✓
- No**              The facility does not have an SPCC plan, or the plan is not signed by a Professional Engineer.
- NA**              The facility is not required to have an SPCC plan.

### **4.3d      Is the phone number for the National Response Center posted on-site for immediate reporting of oil spills?**

In addition to an SPCC plan, EPA requires that if a facility has an accidental release of an oil spill that meets federal reporting requirements (e.g., a discharge of oil that causes a discoloration or “sheen” on the surface of water, violates water quality standards, or causes a sludge or emulsion to be deposited beneath the surface or on adjoining shorelines), the oil spill must be reported to the **National Response Center (NRC)** at **(800) 424-8802**.

- Yes**              NRC phone number is available on-site. ✓
- No**                NRC phone number is not available.

## SECTION 5.0 RECORDKEEPING

### 5.1 NPDES Recordkeeping

**NOTE:** The following questions, one of which is included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *NPDES recordkeeping* for compliance with environmental requirements:

- a. ***Does the facility keep accurate records of monitoring information for the minimum requirement of 3 years? (p. 63)***
- b. *As part of the storm water pollution prevention plan, does the facility maintain records of incidents (e.g., spills or other discharges) and other information describing the quality and quantity of storm water discharges? (p. 64)*
- c. *As part of the storm water pollution prevention plan, does the facility maintain records documenting inspections and maintenance activities? (p. 64)*

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

#### 5.1a **Does the facility keep accurate records of monitoring information for the minimum requirement of 3 years?**

It is extremely important to keep accurate records of monitoring information. Monitoring results for wastewater discharges must be reported on a Discharge Monitoring Report (DMR) form to the NPDES permitting agency. The permit will specify the monitoring and reporting schedule. Such requirements are determined on a facility-specific basis. Records of monitoring information generated under the NPDES program must include:

- The date, exact place, method, and time of sampling and the names of the person or persons taking the samples;
- The dates analyses were performed;
- Who performed the analyses;
- The analytical techniques or methods used;
- The results of such analyses.

NPDES permits require that all records related to monitoring must be maintained at the facility for at least 3 years. Many states require these records to be maintained for at least 5 years.

- Yes** Facility maintains monitoring records as described above. ✓
- No** Facility does not maintain monitoring records listed above and/or for a minimum of 3 years.
- NA** Facility does not have wastewater discharges.

**5.1b As part of the storm water pollution prevention plan, does the facility maintain records of incidents (e.g., spills or other discharges) and other information describing the quality and quantity of storm water discharges?**

- Yes** Facility maintains these records as described above. ✓
- No** Facility does not maintain these records.
- NA** Facility is not required to have an SWPPP.

**5.1c As part of the storm water pollution prevention plan, does the facility maintain records documenting inspections and maintenance activities?**

- Yes** Facility maintains these records as required. ✓
- No** Facility does not maintain records as required.
- NA** Facility is not required to have an SWPPP.

## 5.2 Recordkeeping for Air Emissions

**NOTE:** The following questions, all of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *air emissions recordkeeping* for compliance with environmental requirements:

- a. **Does the facility meet the recordkeeping requirements of its air permit(s)? (p. 64)**
- b. **If the facility owns/operates appliances that contain ozone-depleting refrigerants, does the facility maintain all required records? (p. 65)**

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

**5.2a Does the facility meet the recordkeeping requirements of its air permit(s)?**

Facilities that conduct certain operations (e.g., parts cleaning, painting/paint removal, burning of fuel, etc.) may be required to obtain an air permit. Many air permits require recordkeeping to verify permit compliance. Contact the state or local air pollution control authority for more information.

- Yes** Facility meets the recordkeeping requirements of its air permit(s). ✓
- No** Facility does not meet the recordkeeping requirements of its air permit(s).
- NA** Facility is not required to have an air permit.

### 5.2b If the facility owns/operates appliances that contain ozone-depleting refrigerants, does the facility maintain all required records?

EPA has established recordkeeping requirements for servicing and disposal of air-conditioning and refrigeration equipment that contains regulated ozone-depleting refrigerants. If the facility owns/operates appliances (e.g., motor vehicle air conditioners, refrigerators, etc.) containing ozone-depleting refrigerants, it must maintain the following records:

- Records documenting the date and type of servicing performed on the appliances;
- Records of refrigerant purchased and added; and
- If the facility employs technicians to service and maintain refrigerant-containing appliances, records demonstrating compliance with the certification requirement.

- Yes**                      Facility maintains records described above. ✓
- No**                              Facility does not maintain records described above.
- NA**                              Facility does not own/operate these appliances.

## 5.3 RCRA Recordkeeping

**NOTE:** The following question, which is included in the accompanying checklist, will help the facility examine its operations relating to *RCRA recordkeeping* for compliance with environmental requirements:

- a. ***Does the facility keep copies of its manifests for the 3 year minimum requirement? (p. 65)***

This question appears in the following text, accompanied with a discussion of the preferred answer (indicated with a “✓”) for environmental compliance.

### 5.3a Does the facility keep copies of its manifests for the 3 year minimum requirement?

The Uniform Hazardous Waste Manifest Form is a multi-copy shipping document that reports the contents of the shipment, the transport company used, and the treatment/disposal facility receiving the wastes. The hazardous waste generator, the transporter, and the treatment, storage or disposal facility must each sign this document and keep a copy. The waste treatment, storage or disposal facility must send a copy back to the generating facility. This completes the loop on the movement of the shop’s hazardous waste, from generation to disposal. A copy of the manifest must be kept at the facility for 3 years.

- Yes**                      Facility maintains a copy of its manifest for a minimum of 3 years. ✓

- No** Facility has not maintained a copy of its manifest for a minimum of 3 years.
- NA** Facility does not generate hazardous waste.

## 5.4 Recordkeeping for Underground Storage Tanks

**NOTE:** The following questions, some of which are included in the accompanying checklist (highlighted in **bold**), will help the facility examine its operations relating to *recordkeeping for underground storage tanks* for compliance with environmental requirements:

- a. **Does the facility maintain leak detection records? (p. 66)**
- b. **Does the facility maintain corrosion protection records? (p. 67)**
- c. *Does the facility maintain records showing that a repaired or upgraded system was properly repaired or upgraded? (p. 67)*
- d. *Does the facility maintain records of the site assessment results required for permanent closure for at least 3 years after closing a UST? (p. 67)*
- e. *Does the facility maintain records that document its financial responsibility? (p. 68)*

These questions appear in the following text, accompanied with a discussion of the preferred answer (indicated with a "✓") for environmental compliance.

### UST Recordkeeping Requirements

Owners and operators of facilities with USTs are responsible for assuring that there are no leaks, spills, or overfills from their tank systems. An automotive shop should keep all its records on-site. The file must have a copy of your notification to the state (or EPA for American Indian lands), leak detection documentation, rust prevention equipment tests, records of any tank repairs, financial tools used to demonstrate the ability to cleanup and compensate others in the event of contamination, and closure records. The inspector will ask to see copies of these records

Facilities should check with their regulatory authority about specific recordkeeping requirements. Generally, a facility should follow this useful rule of thumb for recordkeeping, when in doubt, keep it.

#### 5.4a Does the facility maintain leak detection records?

The facility will have to keep records of leak detection performance and maintenance information including the following:

- Monthly tank monitoring (no matter the method) for one year
- Pipes with product delivered under pressure, keep monthly pipe monitoring/annual line tightness test/annual test of line leak detector operation, for one year.
- Suction pipe monthly monitoring for one year, or line tightness tests for 3 years.
- Any repair/calibration records for one year

- Performance claims from the maker of your equipment or your installer, for 5 years

- Yes** Facility maintains records listed above on site. ✓
- No** Facility does not maintain all records listed above on site.
- NA** Facility does not have a UST.

**5.4b Does the facility maintain corrosion protection records?**

Corrosion protection records include results of the last two tests proving the cathodic protection system is working or the last three inspections proving that impressed current systems are operating properly.

- Yes** Facility maintains corrosion protection records on site. ✓
- No** Facility does not maintain corrosion protection records on site.
- NA** Facility does not have a UST.

**5.4c Does the facility maintain records showing that a repaired or upgraded system was properly repaired or upgraded?**

- Yes** Facility maintains records as described above. ✓
- No** Facility does not maintain records as described above.
- NA** Facility does not have a UST.

**5.4d Does the facility maintain records of the site assessment results required for permanent closure for at least 3 years after closing a UST?**

These results are important because they show the impact of a facility's UST on the surrounding area.

- Yes** Facility maintains records for at least 3 years after closing a UST as required. ✓
- No** Facility does not maintain records for at least 3 years after closing a UST as required.
- NA** Facility has not closed any USTs.

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**5.4e Does the facility maintain records that document its financial responsibility?**

Financial responsibility documentation shows one of the following. The facility:

- Participates in a state financial assurance fund;
- Has insurance coverage;
- Has a guarantee from another firm;
- Has a surety bond;
- Has a letter of credit;
- Has passed a financial test;
- Has set up a trust fund; or
- Uses another financial method(s) of coverage approved by the state.

- Yes** Facility maintains records that document financial responsibility. ✓
- No** Facility does not maintain records that document financial responsibility.
- NA** Facility does not have a UST.



## **SECTION 6.0 GLOSSARY OF TERMS**

**Aboveground storage tank:** Any tank or container that is aboveground, partially buried, bunkered, or in a subterranean vault. This includes floating fuel systems.

**Acute Hazardous Waste:** Commercial chemical products and manufacturing intermediates having the generic names listed in 40 CFR 261.33; off-specification commercial chemical products and manufacturing chemical intermediates which, if they met specification, would have the generic names listed; any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill of any of these substances; any residue remaining in containers that are not empty by RCRA standards (40 CFR 261.7)

**Aquifer:** A saturated water bearing formation of permeable rock, sand, or gravel.

**Caustic:** Any substance which can burn, dissolve, corrode, or eat away by chemical reaction.

**CERCLA Hazardous Substances:** CERCLA Section 101(14), as amended, defines "hazardous substance" by referencing other environmental statutes, including: CWA Sections 311 and 307(a); CAA section 112; RCRA Section 3001; and TSCA Section 7. A list of over 600 CERCLA hazardous substances is provided in 40 CFR 302.4. EPA has the authority to designate additional hazardous substances not listed under the statutory provisions cited above.

**CFR:** Code of Federal Regulations. A codification of the regulations published by federal government agencies. EPA regulations can be found at Title 40 - Protection of Environment.

**Chlorofluorocarbons (CFCs):** A family of gases commonly used in refrigeration and air conditioning units. CFCs are one of several chemicals that are generally stable in the atmosphere but degrade under intense ultraviolet light. When the CFC breaks down it releases chlorine or bromine atoms, which damage the upper ozone layer.

**Clean Air Act (CAA):** The federal law designed to improve air quality by regulating air pollution emission from stationary and non-stationary sources. The Act includes National Ambient Air Quality Standards (NAAQS) for specific pollutants.

**Cleanup:** Actions taken to deal with a release or threat of a hazardous substances release that could affect humans or the environment. The term "cleanup" is sometimes used interchangeably with the terms "remedial action," "removal action," "response action," "remedy," "remediation," or "correction action."

**Cleanup Operation:** An operation in which hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleaned up, or in any other manner processed or handled with the ultimate goal of making the site safer for humans or the environment.

**Clean Water Act (CWA):** The purpose of this federal law is to restore and maintain the water quality of lakes, streams and rivers. This goal is being pursued by controlling both point sources and non-point sources of discharge into surface water.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):** The federal law established in 1980 to identify, investigate, and clean up sites that might release hazardous substances into the environment. It also established funding for these cleanup projects (commonly called Superfund) and procedures for recovering any fund money expended. CERCLA also requires the reporting of spills and releases of hazardous substances.

**Container:** Any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled, including drums, pails, buckets, and inner liners.

**Corrosive:** Material with a pH of less than 2.0 or greater than 12.5 or a material capable of dissolving or wearing away steel at a rate greater than 0.25 inch per year.

**Cradle-to-Grave:** The Resource Conservation and Recovery Act requirement for management and tracking of hazardous waste is documented from the source of the waste (i.e., generator) through its transportation, to treatment, storage and eventually acceptance by a disposal facility.

**Department of Transportation (DOT):** The federal agency that regulates the transport of hazardous materials under the Hazardous Materials Transportation Act. These materials include CERCLA hazardous substances and RCRA hazardous wastes.

**Direct Discharge:** Clean Water Act defines direct discharge as any addition of any pollutant or combination of pollutants to (a) U.S. waters from any "point source", or (b) waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the U.S. from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

**Discharge:** The accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of waste into or on any land or water.

**Disposal:** The discharge deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into any land or water so that such solid waste or hazardous waste, or any constituent thereof, enters the environment, is emitted into the air, or is discharged into any waters, including groundwater.

**Disposal Facility:** A facility or part of facility at which solid or hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure.

**Effluent:** Any gaseous, liquid, or solid waste material that is released into the environment.

**Emergency Response:** A response effort by employees from outside the immediate release area or by other designated responders (i.e., mutual-aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances which can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area, or by maintenance personnel, are not considered to be emergency responses within the scope of the OSHA HAZWOPER standard. Responses to releases of hazardous substances

involving no potential safety or health hazard (i.e., fire, explosion, or chemical exposure) are not considered to be emergency responses.

**EPA Hazardous Waste Code:** The code assigned by EPA to each hazardous waste listed in RCRA regulations and to each hazardous waste characteristic identified in RCRA regulations.

**Evacuation:** A personnel or population protection strategy that provides for the orderly movement of people away from an actual or potential hazard.

**Facility:** All buildings, structures, equipment, and other stationary items that are located on a single site or on continuous or adjacent sites and that are owned or operated by the same person (or by any person which controls, is controlled by, or under common control with such person). Under certain circumstances, a facility can include rolling stock and other transport vehicles.

**Fire Hazards:** Hazardous chemicals, including flammable chemicals, that are liable to cause fire through friction, absorption, spontaneous chemical changes, retained heat, or which can be ignited readily and burn vigorously and persistently; combustible liquids having flashpoints at or above 90°F but below 100°F; flammable liquids with flash points below 100°F; pyrophoric chemicals that ignite spontaneously in air at temperatures of 130°F or below; and oxidizers that can promote combustion in other materials, causing fire either by themselves or through the release of oxygen or other gases.

**Generator of Hazardous Waste:** Entity that produces hazardous waste. Generators are classified by how much hazardous waste they produce within a calendar month. There are three classes of waste generators: conditionally exempt small quantity generators, small quantity generators, and large quantity generators. The generator is required to determine if a solid waste meets the hazardous waste definition, either “listed” or “characteristic.”

**Groundwater:** Water below the land surface in a zone of saturation.

**Hazardous Material:** A substance designated by the Department of Transportation as posing a potential hazard when transported. See 49 CFR 171.101 for a list of DOT hazardous materials. Hazardous wastes requiring a manifest are considered hazardous materials.

**Hazardous Substance:** CERCLA Section 101(14), as amended, defines “hazardous substance” by referencing other environmental statutes, including: CWA Sections 311 and 307(a); CAA section 112; RCRA Section 3001; and TSCA Section 7. A list of over 600 CERCLA hazardous substances is provided in 40 CFR 302.4. EPA has the authority to designate additional hazardous substances not listed under the statutory provisions cited above.

**Hazardous Waste:** A solid waste material that may cause or significantly contribute to serious illness or death or that may pose a substantial threat to human health or the environment if not managed properly, and which includes liquids, semisolids, and contained gases. Hazardous wastes are subject to manifest reporting requirements. A material is considered a hazardous waste under RCRA if it meets one of the following conditions:

- The material has been listed as a hazardous waste by regulations.
- It is ignitable, corrosive, reactive, or toxic.
- It is a mixture of a listed hazardous waste and a non-hazardous waste.

**Hazmat:** A contraction of Hazardous Materials.

**Ignitable:** Material that has a flashpoint less than 140°F, is combustible through friction, is combustible through absorption of moisture, or can spontaneously combust.

**Incident:** A release or potential release of a hazardous material, substance, or waste into the environment.

**Indirect Discharge:** A discharge which goes to a publicly-owned treatment works (POTW). Indirect discharges do not need a National Pollutant Discharge Elimination System (NPDES) permit but must comply with the POTW pretreatment standards.

**Land Disposal:** Includes, but is not limited to, placement of hazardous waste in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, or concrete vault or bunker intended for disposal purposes. Land disposal facilities are a subset of treatment, storage, and disposal facilities (TSDFs). Groundwater monitoring is required at all land disposal facilities. Waste material can only be disposed of at a permitted facility.

**Land Disposal Restrictions:** Regulations prohibiting the disposal of hazardous waste on land without prior treatment of the waste. Land disposal restriction notifications ensure proper treatment of the waste prior to disposal.

**Landfill:** A disposal facility or part of a facility where waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well.

**Listed Waste:** Waste listed as hazardous under 40 CFR Part 261. A waste is listed as a hazardous waste based on the process from which the waste was generated and/or the constituents found in the waste.

**Local Emergency Planning Committee (LEPC):** A local community group, including police and fire departments, which must be notified in the event of an accidental release that exceeds the reportable quantity of the following substances (1) EHSs (listed in 40 CFR Part 355, Appendices A and B); or (2) hazardous substances subject to emergency notification requirements under CERCLA Section 103(a) (listed in 40 CFR 302.4).

**Manifest:** The “cradle-to-grave” paperwork recording hazardous waste movement from its generation through final storage or disposal. All parties must keep records for 3 years.

**Material Safety Data Sheets (MSDS):** Information sheets which provide workers with details on the health and physical hazards of chemicals to which they may be exposed in the workplace.

**National Pollutant Discharge Elimination System (NPDES):** A permitting system under the CWA established for regulating direct discharges of wastewater from industries and municipalities into surface waters of the United States.

**Nonattainment:** The status of an area that is determined to exceed any national ambient air quality standard for a particular pollutant.

**Oil:** Oil of any kind or in any form, including but not limited to petroleum, fuel oil, oil sludge, oil refuse, and oil mixed with wastes.

**On-site:** The same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties are at a crossroads intersection and access is by crossing, as opposed to going along, the right-of-way. However, non-contiguous properties owned by the same person but connected by a right-of-way which he or she controls and to which the public does not have access are also considered on-site properties.

**Operator:** The person responsible for the overall operation of a facility or process.

**Occupational Safety and Health Administration (OSHA):** A federal agency which protects worker health and safety under the Occupational Safety and Health Act and plays an important role in environmental issues such as chemical exposure in the workplace.

**Outfall:** The mouth of a drain or sewer which flows directly into surface water.

**Owner:** The person who owns a facility or part of a facility.

**Permit:** A written document issued by the government that establishes standards and/or pollutant limits for water discharges, air emissions, or for the handling, treating, storing, or disposing of hazardous waste.

**Pesticide:** Any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest, or any substance/mixture of substances intended as a plant regulator, defoliant or desiccant.

**pH:** A measure of alkalinity or acidity on a scale whose values range from 0 to 14 with 7 representing neutral. Numbers less than 7 correspond to increasing acidity. Numbers greater than 7 correspond to increasing alkalinity.

**Point Source Discharges:** Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

**Pollutant or Contaminant:** Any element, substance, compound, or mixture which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingesting through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions, or physical deformation in such organisms or their offspring. It presents an imminent and substantial danger to public health or welfare.

**Pollution Prevention:** Any source reduction activity that results in the reduction of total volume of waste, reduction of toxicity of waste, or both, as long as the reduction is consistent with the goal of minimizing present and future risks to public health and the environment. Transfer of

hazardous constituents from one environmental medium to another does not constitute waste minimization (see waste minimization).

**Publicly-Owned Treatment Works (POTW):** Any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a "State" or "municipality." This definition includes sewers, pipes, or other conveyances, only if they convey wastewater to a POTW providing treatment.

**Releases:** Defined by federal and most state laws as any spilling, leaking, pouring, dumping, emitting, discharging, injecting, escaping, leaching, or disposing of hazardous wastes or hazardous substances into the environment. This includes the abandonment of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant. Under environmental laws, the term "release" does not include releases which result in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons.

**Reportable Quantity (RQ):** The minimum quantity of a CERCLA hazardous substance or EPCRA extremely hazardous substance which is reportable. A release equal to or greater than the RQ within a 24-hour period must be reported to the appropriate authorities (i.e., National Response Center).

**Resource Conservation and Recovery Act (RCRA):** The federal act which regulates the management of hazardous waste from the point of generation through transport, storage, and disposal. It also regulates underground storage tanks and nonhazardous waste disposal under separate subtitles.

**Safe Drinking Water Act (SDWA):** The federal act which deals with the quality of treated drinking water. Regulations developed by EPA under authority of this act include drinking water standards.

**Sludge:** A solid, semi-solid, or liquid material produced by the process of settling or sinking caused by gravity. Sludges are generally waste products and are commonly generated by municipal and industrial water treatment processes and air pollution control processes. Sludges also occur in process tanks where liquids are stored. Sludges must be tested to determine if they are hazardous wastes.

**Soil and Groundwater Analysis:** Tests used to determine the presence of substance contamination and concentration levels. The analysis may involve soil borings and the installation of test pits and/or monitoring wells.

**Solid Waste:** Any garbage, refuse, sludge, or other waste materials not excluded by definition. Exclusions include domestic sewage and any mixture of other wastes that pass through a sewer system to a publicly-owned treatment works (POTW); industrial wastewater discharges that are point source discharges subject to regulation under the Clean Water Act; irrigation return flows; nuclear materials defined by the Atomic Energy Act; and "in situ" or "in position" mining materials. Wastewaters that are collected, stored, or treated before discharge and sludges generated by wastewater treatment are not excluded.

**Solvent:** Any substance that can dissolve another substance. The term is most often used to mean petroleum-based solvents capable of dissolving greases, oils, tars, and asphalts. Many petroleum-based solvents are volatile, flammable, may be hazardous, and may be regulated as an air pollutant.

**Special Waste:** A type of waste which is not a hazardous waste but requires more care than a regular solid waste and may require special disposal procedures. Examples include: certain sludges, asbestos containing waste materials, and oil waste.

**Spill Prevention, Control, and Countermeasure (SPCC) Plan:** Plan designed to ensure that a facility puts in place containment and other control measures that will prevent oil spills from reaching navigable U.S. waters.

**State Emergency Response Commission (SERC):** The state agency which must be notified in the event of an accidental release of an extremely hazardous substance, a CERCLA hazardous substance, or a chemical with an MSDS above the chemical's threshold planning quantity (TPQ) or its reportable quantity (RQ).

**Storage:** The holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere. Generators are required to have a RCRA permit for storage of hazardous waste for more than 90 days or 180 days, depending on the generator's status. Treatment or disposal facilities must be permitted.

**Toxicity Characteristic Leaching Procedure (TCLP):** A physical/chemical analytical procedure used to determine if a substance is classified as a toxic hazardous waste. If the test results show that a solid waste exceeds any of the limits prescribed for 39 specific contaminants, the waste is deemed to be a characteristically toxic hazardous waste.

**Treatment, Storage, and Disposal Facilities (TSDFs):** A company (on-site or off-site) where untreated hazardous waste is taken for treatment, storage, and/or disposal. TSDFs are subject to RCRA requirements and permits. TSDFs complete the "cradle-to-grave" cycle requirements. There are many complex rules for facility operations and training of employees.

**Underground Injection Control (UIC):** The program under the Safe Drinking Water Act that regulates the use of wells and other constructed conveyances to dispose or emplace fluids underground. See <http://www.epa.gov/safewater/uic/smallcompliance.pdf> for more information.

**Underground Storage Tank (UST):** USTs are regulated under RCRA, Subtitle I by the federal government, and by individual states under state programs. A UST is a tank, including any underground pipes, which contains or used to contain regulated hazardous substances or petroleum and has at least 10% of its volume beneath the surface of the ground.

**Waste Minimization:** This is the reduction in volume or toxicity of wastes generated by source reduction or recycling. Generators and TSDFs operating under RCRA permits are required to certify annually that they have waste minimization plans in place and that the plans are being implemented at their facilities. Generators must also sign a waste minimization statement when signing the manifest.

**Waters of the United States:** All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; all interstate waters, including interstate "wetlands;" all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) Which are used or could be used for industrial purposes by industries in interstate commerce;

All impoundments of waters otherwise defined as waters of the United States under this definition; tributaries of waters; the territorial sea; and "Wetlands" adjacent to waters (other than waters that are themselves wetlands).

**Wetlands:** Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.



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