

## **SUMPS AND FLOOR DRAINS**

Practically every automotive and truck service facility has a sump for floor drains and/or wash bays. The materials generally collected in these sumps are grit, dirt, grease, oil, soap, and water. Most facilities have their sumps cleaned out once per year by a local septic tank cleaning company. Final disposal of the sump sludge is generally unknown but presumed to be at a local sanitary landfill or wastewater treatment facility. The recent enforcement of State regulations governing the disposal of these sludges has made disposal in landfills and wastewater treatment facilities more difficult.

### **Regulatory Review**

The hazardous/non-hazardous nature of the sump sludge will determine the applicable disposal regulations. To determine the nature of the sludge, a representative sample should be taken and tested for characteristic toxicity with the TCLP test. If the sludge does not exceed TCLP regulatory limits and does not contain one or more of the listed wastes, then it may be treated as a non-hazardous waste.

As a non-hazardous waste, it may be legally disposed in an approved sanitary landfill. In order to send the sludge to a landfill, a special Waste Authorization (SWA) is required by the Louisiana Department of Environmental Quality (LDEQ). To obtain a SWA, a completed application form and a copy of hazardous characteristics test results should be sent to the LDEQ. Upon granting the SWA, the LDEQ will also notify the designated industrial landfill of approval to accept the sludge.

The criteria for obtaining a SWA are: the hydrocarbon content must be less than 1%, there must be no free liquids remaining, and must pass the TCLP toxicity extract tests for heavy metal content. The regulatory limits for heavy metal content and a list of the SWA test parameters are available from LDEQ or LaTAP upon request.

If the sump and floor drain sludge is being supplied to other persons for land application, it is the responsibility of the generator to inform the applicator of all requirements and ensure the requirements are met; otherwise, the generator must stop supplying the sludge for land application. A more thorough summary of the land application regulations is available from LDEQ or LaTAP upon request.

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Any aqueous discharges from these facilities should be disposed of in a manner consistent with Federal and State Regulations. Wastewater meeting pretreatment standards and approved by the local POTW may be disposed of in the sanitary sewer. The discharge of wastewater to a ditch or stream will require NPDES/LDEQ permits. In addition, according to La. R.S. 48:385 any discharge to a state highway ditch, cross ditch, or right-of-way will require approvals from the Louisiana Department of Transportation and Development (LDOTD), 504-379-1301 and Department of Health and Hospitals (LDHH), Office of Public Health, 504-568-5102.

## **Recommendations**

LDEQ suggests that all automotive and truck shops who are using a sump or pit for drainage of floor or wash by wastes have that sludge tested to determine if it meets the TCLP hazardous waste criteria. Sump sludge should be tested for the eight listed heavy metals, and BTEX. These are the most likely contaminants to be found in the sludge for servicing operations. A list of analytical laboratories that can perform the necessary test procedures is available from LaTAP upon request.

Operators of automotive and truck shops should only use environmentally acceptable cleaners and detergents, and eliminate the use of solvents. This will help assure that any sludges generated will be non-hazardous.

If the sludge does not exceed any of the TCLP parameters, then a SWA should be obtained from the LDEQ. This will allow the sludge to be properly disposed of in a sanitary landfill approved for industrial wastes. Should the sludge exceed any of the SWA test parameters, then alternative methods must be used for disposal. To landfill the sludge through a SWA it will be necessary to have the water removed or the waste solidified. This may be difficult and costly to achieve on-site. Some landfills provide this service to large volume customers for an additional fee.

It is recommended that automotive and truck shops who utilize septic tank cleaning companies for disposal know the final disposition of the sludge (i.e. landfill, landspreading, wastewater treatment facility). If the sludge is a hazardous waste due to TCLP test results, landfilling and landspreading would not be acceptable. Should the sludge testing indicate a non-hazardous waste material, recycling of the sludge through land spreading methods is acceptable. If the sludge is being supplied to other persons for land application, the generator must inform the applicator of all requirements and ensure the requirements are met; otherwise, the generator cannot continue to supply the sludge for land application.

Automobile repair shops produce many types of waste – some hazardous, some industrial, not necessarily hazardous but still potentially damaging to the environment if not handled properly, and all requiring proper treatment and/or disposal at significant cost to the business. The types of waste that a shop owner or manager must contend with include:

- Solvents (paints, paint thinners, degreasers)
- Antifreeze
- Scrap Metal
- Batteries and Other Auto Parts
- Oils and Oil Filters
- Fuels and Fuel Filters
- Acids and Alkalis
- Contaminated Rags and Towels

Whatever the nature and characteristics of the waste, they all have one thing in common:

### **“Loss of Resources and Loss of Money”**

The most effective way to minimize these losses is to avoid producing the waste in the first place. This is the concept behind LaTAP’s Pollution Prevention Program. This Technical Brief was produced to assist you and others in the automobile repair business to reduce your losses while at the same time helping to improve our environment.

Business throughout the country are implementing waste reduction programs and finding that there are many benefits to be gained from this approach to managing our resources. Reducing the amount of waste your business generated can help you:

- Reduce operating costs
- Reduce waste disposal costs
- Reduce long-term liability
- Help sustain environmental quality
- Improve workplace safety and employee health
- Project a positive public image

## **HOW DO YOU GET STARTED**

Getting off to a good start is crucial to the success of any endeavor. Here are some important things to consider when undertaking a waste reduction program:

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- Make a commitment to pollution prevention. This commitment must start at the top, with the owner or manager of the shop, and extend to every employee.
- Involve the employees in designing and implementing pollution prevention measures.
- Provide training in waste reduction techniques and practices. Don't let this be a one-shot effort – provide periodic “refresher courses” but more importantly set an example and increase employee's awareness of the importance of waste reduction.
- Establish incentives to encourage workers to use waste reduction techniques and to suggest changes in design or operating procedures that will further reduce waste generation.
- Assess the shop's waste. Identify sources, types, and amounts of waste being produced. This will make it easier to pinpoint areas where waste reduction techniques can be applied and to measure the success of your efforts.

## ESTABLISHING GOOD HOUSEKEEPING PRACTICES

Improving a business's housekeeping practices is often the easiest and least expensive way to reduce waste. Good housekeeping includes good inventory control and efficient operating procedures.

- **Keep storage and work areas clean** and well organized, and keep all containers properly labeled.
- **Inspect materials upon delivery**, and immediately return unacceptable materials to the supplier.
- **Keep accurate records of material usage** so that you can measure reductions in use. Mark the purchase date on each container and adopt a “first in, first out” policy so that older materials are used up before new ones are opened; assign someone to distribute and keep track of the materials.
- **Locate and repair all leaks** to prevent loss of raw materials. Use dry absorbents to clean up spills. Practice preventive maintenance to avoid future losses.
- **Keep all containers covered** to prevent evaporation and spillage.
- **Keep waste streams separate and well identified** to increase their potential for reuse, recycling, or treatment. Don't allow non-hazardous materials to become contaminated with hazardous materials, as this will result in all of the waste needing to be treated as hazardous waste.
- **Install flow meters**, flow control devices, and shut-off nozzles to reduce water usage.

## SOLVENTS – REDUCING, REUSING, AND RECYCLING

Auto repair shops typically use solvents in a variety of operations, including parts cleaning, degreasing, and painting. Many of these solvents may be classified as hazardous wastes, and may therefore require expensive treatment and/or disposal. The use of some chlorinated solvents is being phased out by the U.S. Environmental Protection Agency. A number of pollution prevention strategies can be used to reduce both the toxicity and quantity of spent solvent requiring disposal. Manuals on Alternate Solvent Selection are available from LaTAP.

The following are some suggestions for selecting alternative solvents:

- **Try to find one multi-purpose solvent that can serve a variety of uses.** This will minimize the number of waste streams and increase the potential for recycling spent solvent.
- **Substitute less hazardous solvents for cleaners.** Consider use of water-based cleaners and cutting fluids, and/or install pressure wash systems if feasible.
- **Extend the life of solvent baths.** This can be accomplished by pre-cleaning parts with rags or using a two step process.
- **Minimize solvent loss during drainage of cleaned parts.** Remove parts from the bath slowly to avoid splashing and install drip trays or racks over or near the bath. Return drained solvent to bath.
- **Use on-site recovery techniques** to reuse solvents. Equipment may be purchased or leased.
- **Common recovery methods include:**
  - Decanting** – drawing off liquids from the settled sludge. Alternatively, the bottom sludge may be drained off.
  - Filtration** – passing solvent through a porous medium to remove suspended solids.
  - Distillation** – separating liquids from each other or from solids by taking advantage of their different boiling points.

If solvents cannot be made reusable, try to find a way to recycle them. One possibility is to purchase solvents from a company that will pick up and recycle the spent solvent.

## APPLYING THE THREE Rs TO OTHER SHOP WASTES

### Oils

- Use drip pans to catch lube oils for reuse. Handle oils carefully to avoid spillage.
- Contract with a reputable recycler to collect used oil.

### Caustic Cleaners

- Substitute detergent-based cleaners for caustic products.
- Clean parts mechanically, rather than chemically, whenever possible.

### Other

- Use paints with higher solids content, or water-based paints with no solvent, whenever possible.
- Small quantities of unused paint can be added to primers.
- Collect all scrap metal and recycle.
- Make sure all freon is properly handled and recycled.
- Arrange to have waste antifreeze picked up by a recycler.
- Recycle scrap tires and batteries.

## FOLLOWING UP

As long as wastes are being produced, there is the potential for waste reduction. Less polluting materials, equipment, and procedures are constantly being developed, so that wastes that are difficult or costly to control today may be easily eliminated tomorrow. Your trade association and LaTAP are good sources of information.

When buying new equipment, look for equipment that will minimize both the amount of toxic materials used and the amount of waste produced.

Reassess the shop's operations and waste handling practices periodically. A successful program requires diligence so as to avoid the temptation of slipping back into old more wasteful ways of doing things, and to identify additional waste reduction possibilities.

Publicize the shop's commitment to waste reduction. Customers will feel good about doing business with a company that is environmentally responsible.

## **SOURCES OF ADDITIONAL HELP**

This Technical Brief is not intended to be a comprehensive list of all techniques that can be used to reduce waste in an automobile repair shop. Each shop is unique, with its own combination of wastes and its own individual way of doing business, so will each waste reduction program be different from all others. A number of resources are available to help you develop and implement a program that will meet your shop's individual needs:

LaTAP Louisiana Technical Assistance Program  
University of New Orleans  
New Orleans, LA 70148  
1-800-827-5587  
Local 286-5587  
504-286-5586 FAX

Small Business Assistance Program  
Louisiana Department of Environmental Quality  
Air Quality Division  
P.O. Box 82135  
Baton Rouge, LA 70884-2135  
1-800-259-2890

Transcontinental Materials Exchange  
Institute for Recyclable Materials  
Louisiana State University  
1419 CEBA  
Baton Rouge, LA 70803  
504-388-4594  
504-388-4945 FAX

This publication is one of a series of pollution prevention Technical Briefs for various types of businesses and processes. For more information on this and other pollution prevention and waste reduction material contact LaTAP.