

Iowa Automotive Dealership Waste Study

Sump Sludge: Caution May Be Hazardous

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Shop floor drains and wash bays frequently have a sump to trap debris from being flushed down the drain with the wastewater. The wastewater discharged to the floor drain carries with it grease and grime from the cleaning process. The running water flows over the pit and grit settles into the sump thus removing the grime and making the water sent to the sewer cleaner than the wash water. Over time, sump sludge accumulates and requires removal and disposal.

Typically an automotive dealership will generate sump sludge from the cleaning of the floor drain pits in the wash bay or the shop floor. Sump sludge has the potential to be a hazardous waste due to the presence of toxins from inherent spillage of products such as used motor oil, gasoline, solvent or antifreeze and other automotive fluids.

In Iowa, the U.S. EPA regulates hazardous waste. The federal hazardous waste management standards require that a hazardous/non-hazardous waste determination be made for any waste with the potential to be hazardous. This determination is made by sending a sample of the waste in question to an analytical laboratory for testing. The testing protocol is called the Toxicity Characteristic Leaching Procedure (TCLP).

While the TCLP includes 40 test parameters, wastes need only be tested for the toxins likely to be present. Minimal testing parameters for sump sludge include the eight heavy metals and volatile organic compounds (VOCs). The

cost of the test will vary from one laboratory to the next, but will be approximately \$350.

The TCLP test need only be conducted one time at a facility unless changes in the type of work or waste generated occur.

A representative sample of sump sludge should be tested for these TCLP parameters to make an accurate hazardous/non-hazardous waste determination:

TCLP Parameter	Regulatory Level*	EPA Number
Metals:		
Arsenic	5.0 mg/L	D004
Barium	100.0 mg/L	D005
Cadmium	1.0 mg/L	D006
Chromium	5.0 mg/L	D007
Lead	5.0 mg/L	D008
Mercury	0.2 mg/L	D009
Selenium.....	1.0 mg/L	D010
Silver	5.0 mg/L	D011
VOCs:		
Benzene	0.5 mg/L	D018
Carbon tetrachloride	0.5 mg/L	D019
Chlorobenzene	100.0 mg/L	D021
Chloroform	6.0 mg/L	D022
1,2-Dichloroethylene	0.5 mg/L	D028
1,1-Dichloroethylene	0.7 mg/L	D029
Methyl ethyl ketone (MEK) ..	200.0 mg/L	D035
Tetrachloroethylene.....	0.7 mg/L	D039
Trichloroethylene.....	0.5 mg/L	D040
Vinyl chloride	0.2 mg/L	D043

* Samples exceeding these levels are hazardous.

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If TCLP results show the concentration of any parameter equal to or greater than its corresponding regulatory level, the sump sludge must be managed as hazardous waste. Hazardous waste must be stored in sealed, labeled containers and disposed by an EPA-permitted hazardous waste management company. Hazardous sump sludge must also be included in the facility's hazardous waste inventory and managed on-site in compliance with the applicable generator regulations.

Some good housekeeping and pollution prevention measures such as sweeping the floor before a wash down and using drip pans and/or oil absorbent material to keep spills off the floor could be implemented to reduce the amount of contamination in the wastewater discharged to the floor drains to prevent sump sludge from becoming hazardous in the first place.

If the TCLP test results of the representative sample show concentrations less than regulatory level for each parameter, then the sump sludge is non-hazardous. The following waste disposal options exist for the management of non-hazardous sump sludge:

- 1) The waste can be removed from the facility by a local septic/sump sludge hauler.
- 2) The waste can be dried and land applied, in which case special rules exist to govern that activity.
- 3) The waste can be dried and landfilled as a special waste by submitting a Special



Waste Authorization application which requires completion of the form and submittal of three copies to the receiving landfill. The application should also include TCLP data or other information to document the waste is non-hazardous. The landfill will review the application and, if approved, will forward it to the Iowa Department of Natural Resources. Upon DNR approval, an SWA will be issued to the applicant and landfill and disposal may begin.

An SWA application is available at <http://www.iowadnr.com/waste/sw/files/specialauthoriz.pdf> or by calling the Iowa Waste Reduction Center at 1-800-422-3109.

Call the Iowa Waste Reduction Center (IWRC) for more information about making a waste determination for any waste generated. The IWRC is a free, confidential and non-regulatory small business technical assistance program located at the University of Northern Iowa. The IWRC also offers a free on-site review of any Iowa business with fewer than 200 employees. Contact the IWRC at 1-319-273-8905 or on the web at www.IWRC.org.

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Iowa analytical laboratories able to perform TCLP testing

Ask for a discount to IWRC clients!

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Newton IA 50208

Phone: (800) 858-5227
<http://www.keystonelabs.com>

* KEYSTONE LABORATORY

3012 Ansborough Avenue
Waterloo, IA 50701

Phone: (800) 858-5227
<http://www.keystonelabs.com>

* MIDWEST LABORATORIES, INC.

13611 B Street
Omaha, NE 68144

Phone: (402) 334-7770
<http://www.midwestlabs.com>

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35 West Lincoln Way
Nevada, IA 50201

Phone: (800) 362-0855
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* QCML, INC.

17048 215th Street
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Phone: (319) 386-7827
<http://www.qcml.com>

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Oakdale Hall
Iowa City, IA 52242

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* TESTAMERICA

704 Enterprise Drive
Cedar Falls, IA 50613

Phone: (800) 750-2401
<http://www.testamericainc.com>