

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

SOLID AND HAZARDOUS WASTE DIVISION

SOLID WASTE GUIDELINE #8

TESTING AND DISPOSAL OF SUMP WASTES

Introduction

This document provides guidelines necessary for the characterization, treatment, and disposal of sump wastes which are generated by facilities within the state of Wyoming. Sump wastes include, but are not restricted to those liquid (water, oil, solvents, etc.) and solid (sludge, residue, scale, soil, etc.) mixtures accumulated in a pit, tank, or reservoir constructed to serve as a drain or receptacle for the liquid/solid mixture. This revision (September 9, 1994) to the original guideline modifies the 'Interim Disposal Options' section by clarifying that the options apply to sump waste generators only, by distinguishing between disposal options for large and small volume sump systems, by specifying that large volume sump waste drying units must obtain a *de minimis* exemption and by specifying provisions for the disposal of dried sump wastes.

This guideline is intended to provide the necessary information to sump waste generators so that each type of waste is tested and disposed in accordance with the Wyoming solid waste rules and regulations. Please be advised that disposal facility (landfill) operators can and may impose more stringent standards than those found in this guideline.

Under state hazardous waste rules and regulations and the federal Resource Conservation and Recovery Act (RCRA), sump wastes may be classified as hazardous. Therefore, before a facility's sump wastes can be disposed at a permitted solid waste management facility within Wyoming, the sump waste generator should:

1. Determine the facility's hazardous waste generator status and
2. Chemically test the sump wastes (if the hazardous waste generator status requires that characterization be done).

Determining Generator Status

To determine if the sump wastes generated must be chemically tested prior to disposal, the waste generator must first know if any other wastes generated by the facility are considered hazardous and regulated under state law and RCRA. Generators should be advised that under these laws, it is the generator's responsibility to identify and characterize all hazardous waste which is generated.

Facilities which generate over 1000 kilograms (2200 lbs.) of hazardous waste or more than 1 kilogram of acutely hazardous waste per month are regulated by the U.S Environmental Protection Agency (EPA) as Large Quantity Generators (LQGs). Facilities which generate between 100 and 1000 kilograms (220 to 2200 lbs.) of hazardous waste and no more than 1 kilogram of acutely hazardous waste per month are regulated by the EPA as Small Quantity Generators (SQGs). LQGs and SQGs must handle their hazardous waste at a RCRA-permitted treatment, storage or disposal facility. Facilities which generate less than 100 kilograms (220 lbs.) of hazardous waste and no more than 1 kilogram of acutely hazardous waste per month are considered to be Conditionally Exempt

Small Quantity Generators (CESQGs) by the EPA and may dispose their wastes at permitted sanitary or industrial landfills, provided the Wyoming Department of Environmental Quality (DEQ) and the facility operator approve.

The DEQ or the EPA can be contacted for additional information regarding the state and federal hazardous waste programs.

Once a generator determines the facility's hazardous waste generator status, the generator should evaluate the potential impact of sump wastes on that facility's generator status. Table 1 is designed to assist generators in evaluating this impact.

To use Table 1, the generator should find the monthly amount of non-sump hazardous waste generated by the facility (left column). The number in the right column of Table 1 (TESTABLE QUANTITY of Sump Waste) lists the amount of sump waste that can be generated (removed from the sump) in a single month before chemical testing of the sump waste is required.

For example, if a facility generates 55 lbs. (approximately 5 gallons) of non-sump hazardous waste in a month, the facility can generate (remove from the sump) up to 165 lbs (approximately 15 gallons) of sump waste in that month before chemical testing of the sump waste is necessary.

TABLE 1
WASTES GENERATED ON A MONTHLY BASIS

<u>Non-Sump Hazardous Waste</u>	<u>TESTABLE QUANTITY of Sump Waste</u>
0 lbs.	220 lbs. (20 gallons)
55 lbs. (5 gallons)	165 lbs. (15 gallons)
110 lbs. (10 gallons)	110 lbs. (10 gallons)
165 lbs. (15 gallons)	55 lbs. (5 gallons)
>220 lbs. (20 gallons)	All wastes must be tested

NOTE: Gallon values are approximate volume equivalents.

Please be advised that sump wastes are considered to be collected within the sump and the wastes are not generated until they are removed from the sump. Therefore, for determinations of a facility's hazardous waste generator status, the quantity of sump wastes must be counted in the month that they are removed from the sump even though they may have been collected in the sump for a longer period of time. In order to insure that a facility maintains a CESQG status, the facility sump may require more frequent pumping to maintain monthly hazardous waste generation levels below 220 lbs.

In addition, if the amount of waste to be removed from the sump is over 2200 pounds (approximately 200 gallons) at the time of the sump cleaning, the generator is responsible for testing the sump wastes regardless of the amount of time that was required to collect that sump waste.

Chemical Testing of Sump Wastes

If the facility's generator status (as determined from Table 1) requires testing of the sump waste, the generator should test the sump wastes at least once in order to chemically characterize the wastes. If the sump wastes test non-hazardous, the generator will not be required to test each load of sump waste, but will be required to retest the sump wastes when a change in operations, or product usage, or procedures occurs at the facility. If testing of the waste is required, the generator must forward the analytical laboratory results to this Department for review and approval BEFORE the wastes are removed from the sump for disposal.

Generators required to test their sump wastes should combine liquid and solid portions of the sump waste into a single composite sample to be analyzed. All sump wastes which are sampled should be analyzed for the constituents in Appendix A by using the Toxicity Characteristic Leaching Procedure (TCLP). All sump wastes which are sampled should also be analyzed for ignitability and corrosivity as specified in Appendix B.

A generator may use knowledge of the facility's processes and operations to eliminate testing for any of the organic constituents in Appendix A which do not occur in the facility's waste stream. However, it is the generator's responsibility to be familiar with the constituents of the facility's waste stream and to test for the Appendix A organic constituents which are appropriate.

Car Wash Sumps

Based on the types of materials typically used in car washes, it is unlikely that the sumps at these sites will be hazardous. Therefore, car wash sump wastes generally do not have to be chemically tested prior to disposal at a permitted facility. Car washes which are involved in the following types of operations, however, may need to sample and analyze their wastes to insure that they are not generating hazardous wastes.

1. Car washes which degrease vehicle engines.
2. Car washes which clean pesticide vehicles and equipment.
3. Car washes which clean vehicles handling any of the Appendix A or B constituents.

It is the responsibility of the car wash sump waste generator to determine if the facility's sump wastes have the potential to be hazardous and need to be chemically tested.

Sump Waste Disposal

The mass of all sump wastes which are determined to meet the criteria of a characteristic hazardous waste as described in Appendices A or B, should be counted toward the facility's hazardous waste generator status. All hazardous wastes generated by SQGs and LQGs must be shipped to a RCRA-permitted facility for treatment, storage or disposal.

The following sump wastes are acceptable for disposal at landfill facilities within the state that have been permitted to operate a non-hazardous liquid waste disposal pond or lagoon:

1. Sump wastes which are generated by car washes,
2. Sump wastes which are generated by CESQGs, and
3. Sump wastes which are generated by SQGs and LQGs and which have been chemically tested and shown to be non-hazardous.

Generators of the three types of sump wastes listed above may dispose their wastes at a facility permitted to operate a liquid disposal pond or lagoon under the following conditions:

1. If required by the disposal facility operator, the generator should contact the disposal facility prior to removing the wastes from the sump to obtain either written or verbal authorization to dispose the sump wastes and to schedule the delivery of the wastes to the facility.
2. The Department is recommending that wastes delivered to a disposal facility be accompanied by a record documenting generator, waste, and disposal information. The attached example waste disposal log (Appendix C) could be used by the generator and the disposal facility operator to record waste shipments.

Interim Disposal Options

This section of this guideline provides interim disposal options for those sump waste generators that do not have facilities within the city, county, or solid waste disposal district permitted by the Solid and Hazardous Waste Division or the Water Quality Division (WQD) to accept their liquified sump wastes. These interim disposal options apply only to the sump waste generator and not to sump pumping service operators.

It is the intent of the Department that these disposal options are temporary only and are not a permanent substitute for disposal at a facility permitted to accept sump wastes at a liquid waste pond or lagoon.

Sump wastes generated by car washes, CESQGs, or non-hazardous sump wastes generated by SQGs and LQGs may be disposed by the following procedures if a permitted liquid waste pond or lagoon is unavailable. Interim disposal options are described for both large volume and small volume sump waste generators.

Large volume sump systems

1. If possible, all free liquids should be removed from the sump and either flushed to the sanitary sewer system or delivered to an approved waste water treatment plant. Generators should contact the DEQ/WQD and the waste water treatment plant operator prior to discharging or disposing the liquid portion of the sump.
2. The remaining liquids, sludges and solids may be removed and dried in an onsite or off-site bermed area which is lined with concrete, asphalt or a 30-mil poly-vinyl chloride (PVC) liner. PVC liners must be continuous (i.e., no tears, rips, unwelded seams, etc.) and must be protected from puncture. The drying area must be located at least 20 feet from adjacent property lines and have a lined capacity of no more than 550 cubic feet (20 cubic yards). Smaller drying areas may be appropriate.

NOTE: These types of waste treatment (drying) units must receive a *de minimis* exemption from the department prior to construction and operation. Written requests for *de minimis* exemptions must contain a map which identifies the location of the facility, a brief description of the facility design, an identification of the specific source(s) of wastes, and a demonstration that land owner consent has been obtained.

3. The solid portion of the sump wastes must be dried until it passes the Paint Filter Liquids Test (EPA Method 9095 found in Appendix D). Free liquids which accumulate in the drying area must be removed and disposed as outlined in #1 above.

Small volume sump systems

1. If possible, all free liquids should be removed from the sump and either flushed to the sanitary sewer system or delivered to an approved waste water treatment plant. Generators should contact the DEQ/WQD and the waste water treatment plant operator prior to discharging or disposing the liquid portion of the sump.
2. The following options can be used to drain and dry solids removed from the small volume sump:
 - a. Solids (and associated residual liquids) removed from the sump may be drained and dried within the influence of the sump system by placing the wastes in such a manner that any liquids draining from the solids return to the sump system.
 - b. Solids (and associated residual liquids) removed from the sump may be drained and dried in a small bermed area which is lined with concrete, asphalt or plastic. The treatment area must be at the facility and must only be large enough to drain and dry a single batch of sump solids at one time.

3. The solid portion of the sump wastes must be dried until it passes the Paint Filter Liquids Test (EPA Method 9095 found in Appendix D). Free liquids which accumulate in the drying area described in 2(b) above must be removed and disposed as outlined in #1 above.

Regardless of the volume of sump wastes managed under the above interim disposal options, the following provisions must be observed for the disposal of dried sump wastes

1. Dried wastes from car wash sumps must be delivered to a permitted landfill for disposal.
2. Dried wastes from all other sumps which have been shown to be non-hazardous should be solidified with appropriate amounts of portland cement, sand and clean water and delivered to a permitted landfill for disposal. Other pozzolanic substances such as flyash may also be used.
3. Generators of sump wastes (car wash and others) should obtain verbal or written authorization from the landfill operator prior to delivery of the wastes to the landfill. The department recommends that all sump waste shipments be accompanied by a waste disposal log similar to the example log contained in Appendix C.

Further Information

Please be advised that the above procedures for treatment and disposal of sump wastes are only recommendations from the Department. Other methods for treating and disposing of the liquids and sludges may be submitted to the Department for consideration and approval prior to treatment and disposal. Further information can be obtained from the following Wyoming Department of Environmental Quality offices:

Sump Wastes:

Solid and Hazardous Waste Division	
Cheyenne	777-7752
Lander	332-6924
Casper	473-3450

Liquid Waste Disposal:

Water Quality Division	
Cheyenne	777-7781
Lander	332-3144
Sheridan	672-6457

Signed,

David A. Finley
Administrator
Solid and Hazardous Waste Division

October 26, 1994
Date

Attachments

- Appendix A "Toxic Characteristic Leaching Procedure"
- Appendix B "Additional Waste Analysis"
- Appendix C "Waste Disposal Log"
- Appendix D "Paint Filter Liquids Test - EPA Method 9095"

APPENDIX A

Toxic Characteristic Leaching Procedure

<u>TCLP Constituent</u>	<u>Regulatory Level</u>
Metals	
Arsenic *	5.0 mg/l
Barium	100.0 mg/l
Cadmium	1.0 mg/l
Chromium	5.0 mg/l
Lead *	5.0 mg/l
Mercury *	0.2 mg/l
Selenium	1.0 mg/l
Silver *	5.0 mg/l
Herbicides and Pesticides	
Endrin *	0.02 mg/l
Lindane *	0.4 mg/l
Methoxychlor *	10.0 mg/l
Toxaphene *	0.5 mg/l
2,4-Dichlorophenoxyacetic acid (2,4-D) *	10.0 mg/l
2,4,5-Trichlorophenoxypropionic acid (2,4,5-TP Silvex) *	1.0 mg/l
Organochlorine Pesticides	
Chlordane *	0.03 mg/l
Heptachlor* (and its hydroxide)	0.008 mg/l
Volatile Organics	
Benzene *	0.50 mg/l
Carbon tetrachloride *	0.50 mg/l
Chlorobenzene *	100.0 mg/l
Chloroform	6.0 mg/l
1,2-Dichloroethane	0.50 mg/l
1,1-Dichloroethylene	0.70 mg/l
Tetrachloroethylene	0.7 mg/l
Trichloroethylene *	0.5 mg/l
Vinyl chloride	0.20 mg/l

APPENDIX A (Continued)

Semi-Volatile Organics (Base/Neutral/Acid)

m-Cresol*	200.0	mg/l
o-Cresol*	200.0	mg/l
p-Cresol*	200.0	mg/l
1,4-Dichlorobenzene	7.5	mg/l
2,4-Dinitrotoluene	0.13	mg/l
Hexachlorobenzene*	0.13	mg/l
Hexachloro-1,3-butadiene	0.5	mg/l
Hexachloroethane*	3.0	mg/l
Methyl ethyl ketone	200.0	mg/l
Nitrobenzene	2.0	mg/l
Pentachlorophenol*	100.0	mg/l
Pyridine*	5.0	mg/l
2,4,5-Trichlorophenol*	400.0	mg/l
2,4,6-Trichlorophenol*	2.0	mg/l

* May be used as or in conjunction with pesticides (algi-, bacti-, fungi-, herbi-, and insecti- cides)

APPENDIX B

Additional Waste Analysis

	<u>Constituent</u>	<u>Regulatory Level</u>
Reactive Cyanide	250 mg HCN/kg waste	
Reactive Sulfide	500 mg H ₂ S/kg waste	
Flash Point*	< 140/F	
pH*	pH < 2 or pH > 12.5	

* Applicable only if the waste contains a liquid component when it is generated.

APPENDIX C

WASTE DISPOSAL LOG

GENERATOR INFORMATION

Company Name & Location: _____

Contact Name & Phone: _____

WASTE INFORMATION

Waste Name/Description: _____

Volume (units): _____

Date Generated: _____

Free liquids present?: YES / NO

Basis for determination?: Inspection / Paint Filter Liquids Test

Date Sampled: _____

Lab Results Attached? YES / NO

DISPOSAL AUTHORIZATION

Name/Date of Operator: _____

Name/Date of BLM*: _____

Name/Date of DEQ/SHWD*: _____

DISPOSAL INFORMATION (filled out by operator)

Name of facility: _____

Date of delivery/disposal: _____

Disposal location: _____

*If Applicable

I hereby certify that to the best of my knowledge, the above information is true and correct.

Signature (generator)

