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WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
SOLID AND HAZARDOUS WASTE DIVISION

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## SOLID WASTE GUIDELINE #8

### SUMP WASTE MANAGEMENT

#### 1.0 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 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 (SWRR) & Hazardous Waste Rules & Regulations (HWRR). Please be advised that disposal facility (landfill) operators can and may impose more stringent standards than those found in this guideline. Generators should always contact landfill operators before testing and transporting sump waste for disposal. **The DEQ believes that the best option for wet sump waste management is to make permanent arrangements local Waste Water Treatment Facilities.** This generally eliminates the need for drying, additional handling and otherwise ensures complete biological treatment for the wastes, considering their high moisture content.

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 their generator status, and
- 2) Chemically test the sump wastes (if the facility's hazardous waste generator status exceeds the 220 lbs. threshold for generation of all hazardous wastes in any given calendar month or, in any case, if the disposal facility requires testing; this threshold is discussed below in more detail).

#### 2.0 Determining Generator Status

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.

To determine generator status, the waste generator must first determine 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.

### 2.10 Conditionally Exempt Small Quantity Hazardous Waste Generators

Facilities which generate less than 100 kilograms (220 lbs. or about 1/3 of a 55-gal. drum) of hazardous waste and no more than 1 kilogram of acutely hazardous waste per month are classified as Conditionally Exempt Small Quantity Generators (CESQGs) by the State and may dispose their wastes at permitted sanitary or industrial landfills.

CESQGs only need to test sump waste **if the volume generated in any one month exceeds 220 lbs. (or about 1/3 of a 55 gallon drum)** to comply with DEQ and EPA requirements. 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. Note that individual treatment or disposal facility operators may require testing in addition to the DEQ minimum standards. Generators should always contact waste treatment facility and landfill operators before transporting sump waste for disposal.

The DEQ may be contacted for additional information regarding generator status determinations and waste testing requirements.

### 2.20 Large and Small Quantity Hazardous Waste Generators

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 State 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 State as Small Quantity Generators (SQGs). LQGs and SQGs must handle their hazardous waste at a facility authorized to accept hazardous wastes (referred to as a "RCRA Subtitle C facility"). 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 that is greater than 220 pounds/month, must be shipped to a RCRA Subtitle C permitted hazardous waste treatment, storage or disposal facility.

LQGs and SQGs must test sump waste to demonstrate that it is non-hazardous before transporting it for treatment or disposal to any facility that is not permitted to manage hazardous waste. *(Note: See specific testing requirements for sump waste types listed below)* **If testing indicates that sump waste is hazardous, the volume generated in any one month must be included in generator status determinations.** In addition, if the amount of waste to be removed from the sump is over 2200 pounds (approximately 200 gallons) at the time of 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.

## 3.0 Chemical Testing of Sump Waste

Chapter 8, Section 1(b)(i) of the Wyoming Hazardous Waste Rules & Regulations (HWRR), requires that a person who generates a waste material (as defined in Chapter 1, Section 1(f)(i) of the HWRR) must determine if that waste is hazardous. For sump waste, this determination can be made by laboratory analysis or by using process knowledge, (i.e. by using similar waste type analysis or previous test results). If initial analysis indicates that waste from the generator's sump is NOT hazardous, **the generator may use these test results as process knowledge to make the determination the sump waste is not hazardous.** Waste generators should check with the disposal facility operator in advance to see if additional testing may be required. Test results should be sent to the disposal facility for review and approval before the wastes are transported to the disposal facility.

### 3.1 Test Frequency

Process knowledge may be used to support less frequent future testing. Following initial testing, sump wastes should be retested whenever there is a change in operations, product use, or procedures at the facility. For example, if a larger than normal number of pesticide containing trucks was seen using the vehicle car wash facility, the next load of sump waste should be tested for pesticides.

### 3.2 Sample Collection

#### 3.2.1 Samples Collected for Liquid Waste Disposal

Generators that intend to dispose liquid sump waste should combine liquid and solid portions of the sump waste into a single composite sample. If there is more than one sump bay, a composite sample should be collected by combining one representative sample from each bay.

#### 3.2.1 Samples Collected for Dry Waste Disposal

Generators that intend to dispose of solid sump waste should collect only dried portions of the sump waste into a single composite sample. If there is more than one sump bay, a composite sample should be collected by combining one representative sample from each bay.

### 3.3 Test Constituents

To determine if the sump waste is hazardous, it should be analyzed for the constituents in Appendix A by using the Toxicity Characteristic Leaching Procedure (TCLP). Sump wastes should also be analyzed for ignitability and corrosivity as specified in Appendix B (See the potential exception under Section 3.3.2).

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. A generator may use knowledge of the facility's processes and operations and/or previous test results to eliminate testing for any of the organic constituents in Appendix A which do not occur in the facility's waste stream. If a process change occurs, test constituents should be changed accordingly. Using the example above, if a larger than normal number of pesticide containing trucks was seen using the vehicle car

wash facility, the next load of sump waste should be tested for pesticides.

### 3.3.1 Testing for Municipal Public Car Wash Sump Waste

Test data provided to the Department indicates that sump waste from municipal public car wash sumps is generally not hazardous. Therefore the Department has determined that the following minimum chemical parameters should be tested to determine if the waste is hazardous:

<u>Constituent</u>	<u>Allowable Level</u>
Arsenic (Total metals analysis)	100 mg/l
Barium (Total metals analysis)	2,000 mg/l
Cadmium (Total metals analysis)	20 mg/l
Chromium (Total metals analysis)	100 mg/l
Lead (Total metals analysis)	100 mg/l
Selenium (Total metals analysis)	20 mg/l
Silver (Total metals analysis)	100 mg/l

If any of the above constituent levels are exceeded, the waste shall be classified as hazardous or the sump manager may test another representative sample of the sump waste using the test criteria described in Appendix A (TCLP test criteria) to determine if the waste is hazardous. Process knowledge and/or previous test results may be used to support less frequent future testing.

### 3.3.2 Testing for Non-Municipal Public Car Wash, Commercial & Industrial Sump Waste

Sump waste from non-municipal car washes, mechanic shops, industrial facilities, and other commercial facilities has a greater probability to be hazardous. **Sump wastes from facilities such as these need to be tested using the criteria in Appendices A & B to determine if they are classified as hazardous.** If you have questions, please contact the Department. Disposal facility operators may require other tests. Waste generators should check with the disposal facility operator in advance to see if additional testing may be required.

It is the responsibility of the sump waste generator to determine if the facility's sump wastes have the potential to be hazardous and need to be chemically tested. Common sense can often eliminate testing of pollutants with no significant evidence of their potential to be present in the wastes. For example, the list of "Herbicides and Pesticides" can be often be eliminated if there have been no observances or other evidence of pesticide application vehicles or similar equipment using the facility. A generator's knowledge can also eliminate testing for "Reactive Cyanide", "Reactive Sulfide" and/or "Flash Point", particularly if the car wash is predominately used by personal vehicles vs. commercial/business vehicles.

Testing can be further limited if there is complete absence of any petroleum odor and no layer of oil or no visible oil sheen. This must be the case to eliminate testing for Flash Point, Volatile Organics and/or Semi-Volatile Organics.

#### 4.0 Sump Waste Disposal

Disposal of sump waste without a permit is a violation of Chapter 1, Section 1(f)(i) of the Solid Waste Rules and Regulations. Sump waste disposed at an unpermitted site will need to be promptly removed and transported to a permitted facility. Generators who fail to properly manage sump waste are subject to enforcement action.

##### 4.1 Hazardous Sump Waste Disposal

Hazardous waste must be disposed in a permitted hazardous waste facility if CESQG thresholds are exceeded, not at a municipal landfill or at a wastewater treatment facility.

##### 4.2 Non-Hazardous Sump Waste Disposal

Municipal landfills and wastewater treatment facilities are the most common facilities which may be permitted to receive sump waste. Most municipal landfills are only permitted to accept dry sump waste. Wastewater treatment facilities may accept liquid sump waste. Waste generators should always check with the disposal facility operator in advance to see what waste they will receive and if any special conditions must be met.

#### 5.0 Temporary On-Site Treatment Options

This section provides on-site treatment 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 wet sump waste. On-site means the property where the sump is located. It is the intent of the Department that **these treatment options are temporary only** and are not a permanent substitute for management at a facility permitted to accept wet sump waste. These provisions apply only to sump wastes generated by vehicle car wash facilities, CESQGs, or non-hazardous sump wastes generated by SQGs and LQGs. **These provisions also apply only to generators treating their own waste; waste may not be accepted from other waste generators.** Prior written authorization from the Department is not required for on-site treatment when the conditions below are met. If the conditions below cannot be met, a permit will be needed before sump waste may be treated and sump waste generators should contact the Department to discuss potential options.

- 1) When 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 waste water treatment plant operator prior to discharging or disposing the liquid portion of the sump waste. Precautions must be taken to ensure that no waste is spilled or released during transport to the waste water treatment facility.
- 2.) The remaining liquids, sludges and solids may be removed and dried on the floor in a wash bay or in an on-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). The area shall be fenced to prevent access by the general public.

- 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 C). Free liquids which accumulate in the drying area must be evaporated or removed and disposed as outlined in #1 of this section, above.

## 6.0 Temporary Off-Site Treatment

If on-site treatment it is not practicable, the Department may consider issuing a de minimis exemption for an off-site drying area where a sump waste generator may treat (dry) **only** his own waste before transporting the dried waste to a permitted disposal facility. **Before beginning any off-site sump waste storage or treatment, sump waste generators must submit a written description of their management plans to the Department and prior written authorization must be obtained.** If all of the conditions below cannot be met, a permit will be needed before sump waste may be treated. Sump waste generators should contact the Department to discuss potential options. **These provisions apply only to the treatment of sump waste that exhibits no hazardous characteristics, regardless of generator status.**

- 1) The location and activity must not be in conflict with local codes.
- 2) Treatment on private land requires written authorization from the landowner and documentation that the treatment location is not within 100 feet of any occupied dwelling, school, park, or public recreation area.
- 3) When 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 before being transported to an off-site treatment area. Generators should contact the waste water treatment plant operator prior to discharging or disposing the liquid portion of the sump waste. Precautions must be taken to ensure that no waste is spilled or released during transport to the waste water treatment facility.
- 4) The remaining liquids, sludges and solids may be removed and dried at an approved off-site location. Precautions must be taken to ensure that no waste is spilled or released during transport to the drying area. Drying must be conducted in a 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). The area shall be fenced to prevent access by the general public.
- 5) The solid portion of the sump wastes must be dried until it passes the Paint Filter Liquids Test (EPA Method 9095 found in Appendix C) and promptly transported to a permitted facility for disposal. Free liquids which accumulate in the drying area must be evaporated or removed and disposed as outlined in #1 of this section, above.

**7.0 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,



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Administrator  
Solid and Hazardous Waste Division

6 May 08  
Date

**Attachments**

- Appendix A "Toxicity Characteristic Leaching Procedure"
- Appendix B "Additional Waste Analysis"
- Appendix C "Paint Filter Liquids Test - EPA Method 9095"

## APPENDIX A

### Toxicity Characteristic Leaching Procedure

<u>TCLP Constituent</u>	<u>Regulatory Level</u>
<b>Metals</b>	
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
<b>Herbicides and Pesticides</b>	
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
<b>Organochlorine Pesticides</b>	
Chlordane *	0.03 mg/l
Heptachlor* (and its hydroxide)	0.008 mg/l
<b>Volatile Organics</b>	
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 <sub>2</sub> 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

## Paint Filter Liquids Test

(Remainder of this page intentionally blank.)

METHOD 9095B

PAINT FILTER LIQUIDS TEST

1.0 SCOPE AND APPLICATION

1.1 This method is used to determine the presence of free liquids in a representative sample of waste.

1.2 The method is used to determine compliance with 40 CFR 264.314 and 265.314.

2.0 SUMMARY OF METHOD

2.1 A predetermined amount of material is placed in a paint filter. If any portion of the material passes through and drops from the filter within the 5-min test period, the material is deemed to contain free liquids.

3.0 INTERFERENCES

3.1 Filter media were observed to separate from the filter cone on exposure to alkaline materials. This development causes no problem if the sample is not disturbed.

3.2 Temperature can affect the test results if the test is performed below the freezing point of any liquid in the sample. Tests must be performed above the freezing point and can, but are not required to, exceed room temperature of 25 °C.

4.0 APPARATUS AND MATERIALS

4.1 Conical paint filter -- Mesh number 60 +/- 5% (fine meshed size). Available at local paint stores such as Sherwin-Williams and Glidden.

4.2 Glass funnel -- If the paint filter, with the waste, cannot sustain its weight on the ring stand, then a fluted glass funnel or glass funnel with a mouth large enough to allow at least 1 in. of the filter mesh to protrude should be used to support the filter. The funnel should be fluted or have a large open mouth in order to support the paint filter yet not interfere with the movement, to the graduated cylinder, of the liquid that passes through the filter mesh.

4.3 Ring stand and ring, or tripod.

4.4 Graduated cylinder or beaker -- 100-mL.

5.0 REAGENTS

5.1 None.

## 6.0 SAMPLE COLLECTION, PRESERVATION, AND HANDLING

A 100-mL or 100-g representative sample is required for the test. If it is not possible to obtain a sample of 100 mL or 100 g that is sufficiently representative of the waste, the analyst may use larger size samples in multiples of 100 mL or 100 g, i.e., 200, 300, 400 mL or g. However, when larger samples are used, analysts shall divide the sample into 100-mL or 100-g portions and test each portion separately. If any portion contains free liquids, the entire sample is considered to have free liquids. If the sample is measured volumetrically, then it should lack major air spaces or voids.

## 7.0 PROCEDURE

7.1 Assemble test apparatus as shown in Figure 1.

7.2 Place sample in the filter. A funnel may be used to provide support for the paint filter. If the sample is of such light bulk density that it overflows the filter, then the sides of the filter can be extended upward by taping filter paper to the inside of the filter and above the mesh. Settling the sample into the paint filter may be facilitated by lightly tapping the side of the filter as it is being filled.

7.3 In order to assure uniformity and standardization of the test, material such as sorbent pads or pillows which do not conform to the shape of the paint filter should be cut into small pieces and poured into the filter. Sample size reduction may be accomplished by cutting the sorbent material with scissors, shears, a knife, or other such device so as to preserve as much of the original integrity of the sorbent fabric as possible. Sorbents enclosed in a fabric should be mixed with the resultant fabric pieces. The particles to be tested should be reduced smaller than 1 cm (i.e., should be capable of passing through a 9.5 mm (0.375 inch) standard sieve). Grinding sorbent materials should be avoided as this may destroy the integrity of the sorbent and produce many "fine particles" which would normally not be present.

7.4 For brittle materials larger than 1 cm that do not conform to the filter, light crushing to reduce oversize particles is acceptable if it is not practical to cut the material. Materials such as clay, silica gel, and some polymers may fall into this category.

7.5 Allow sample to drain for 5 min into the graduated cylinder.

7.6 If any portion of the test material collects in the graduated cylinder in the 5-min period, then the material is deemed to contain free liquids for purposes of 40 CFR 264.314 and 265.314.

## 8.0 QUALITY CONTROL

8.1 Duplicate samples should be analyzed on a routine basis.

## 9.0 METHOD PERFORMANCE

9.1 No data provided.

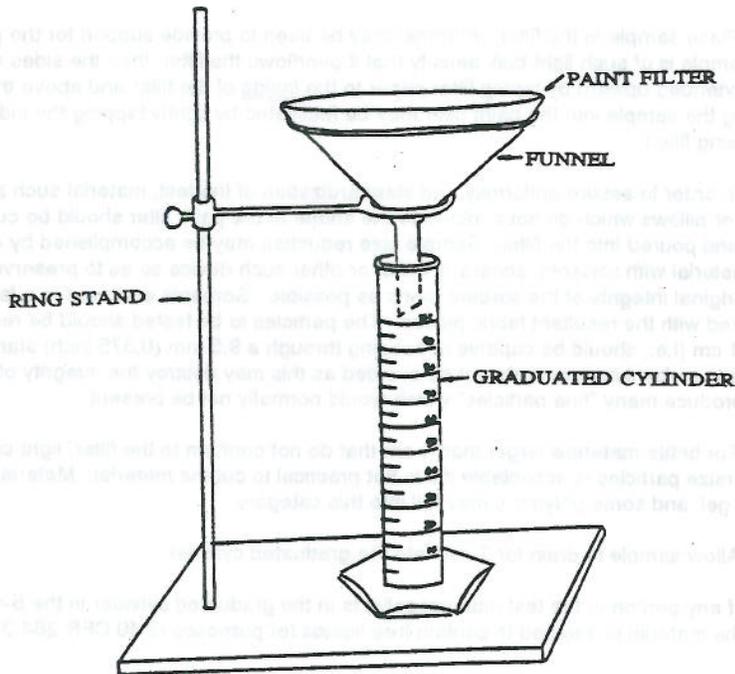
## 10.0 REFERENCES

10.1 None provided.

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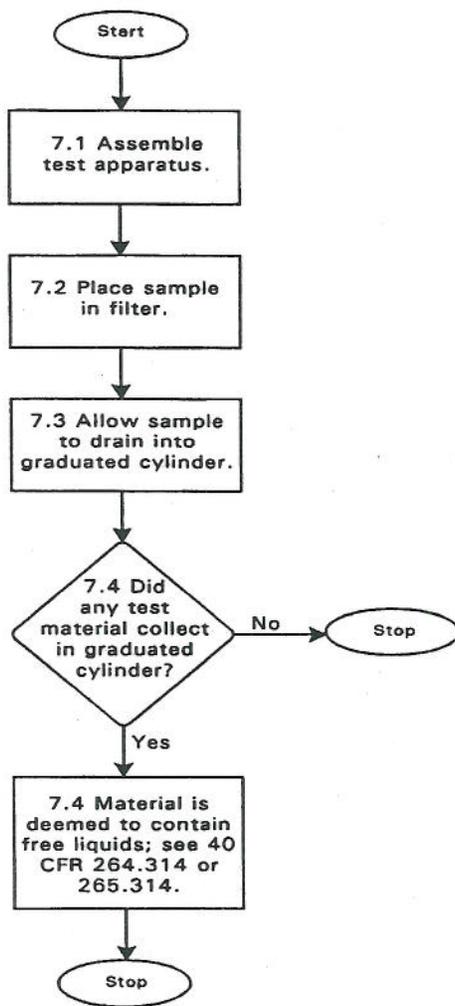
FIGURE 1  
PAINT FILTER TEST APPARATUS



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METHOD 9095B  
PAINT FILTER LIQUIDS TEST



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