Waste Determination Guidance

In accordance with Env-Wm 502.01 of the Hazardous Waste Rules, generators of waste shall determine if that waste is hazardous waste. Env-Wm 502.01 (a-c) provides a list of steps to follow when making the determination. The steps include:

1. Determine if material is a hazardous waste,
2. Determining whether the waste is exempted in Env-Wm 401.03,
3. Referring to the "list" of hazardous wastes in Env-Wm 402,
4. Determining whether the waste possesses a "hazardous waste characteristic" in Env-Wm 403 and
5. Determining whether the waste is a "hazardous waste mixture" or other material regulated in Env-Wm 404.

The task of determining whether a waste is hazardous waste may be accomplished by analytical testing and/or by using knowledge of the hazardous nature or characteristics of the waste based on the materials or processes used to generate the waste. The use of "generator knowledge" and the need for specific analytical testing is discussed below. A listing of laboratories that test hazardous waste is also available at: http://www.des.state.nh.us/hwcs/vendor_lists.htm

This summary seeks to provide waste determination guidance for a short list of common wastes generated at automotive dealerships and repair shops. These wastes include, but are not limited to:

1. **Waste gun washer** - Gun washer may be "ignitable" (D001) and/or contain "F" listed solvents (F001-F005). Generators should also consider metals that may be present in paint products such as cadmium (D006) and chromium (D007). Analyses to consider when conducting a determination include: flashpoint, toxic metals, and a toxic solvent screen (Method #8260/8270).
2. **Waste parts/transmission washer machine solvents** - Waste solvents may exhibit the characteristic of "ignitability" and/or be contaminated with toxic metals or other solvents (i.e., gasoline). The waste may require analysis for such parameters such as flashpoint, metals, and a toxic solvent screen (Method#8260/8270).
3. **Waste paint** - Paints may be contaminated with thinners and solvents that render the waste "ignitable" (D001) or a listed waste due to "F" listed solvents (F001-F005). Also consider the presence of inherent metals such as cadmium (D006) and/or chromium (D007). Check MSDS's for metal compounds in the paint products.
4. **Waste paint booth filters** - Dry filters may contain toxic metals from paint products. Consult with product MSDS information. Filters may also be saturated with enough solvents to render them "ignitable" (D001).
5. **Waste brake cleaner –** Solvent brake cleaners may be "ignitable" (D001), be contaminated with toxic metals, and/or solvents. Aqueous brake cleaners may be corrosive (D002) and or contain soluble metals. A field pH screening may indicate whether further off-site pH analysis should be conducted.
6. **Waste aqueous parts washer liquids** – Waste aqueous parts washer liquid may be corrosive (D002) and or contain soluble toxic metals. A field pH screening may indicate whether further off-site pH screening may indicate whether further off-site pH analysis should be conducted.

7. **Waste rags contaminated with solvents/oils/paint** - Waste cloth rags may be managed in accordance with DES's contaminated wiper policy (Refer to DES Fact Sheet #WMD-HW-6 "Contaminated Cloth Wipers for Laundering" available at: www.des.state.us/hwes/factsheets.htm). The contaminated wipers/rags should not contain "free liquids" when stored or transported for laundering.
8. **Waste antifreeze** - Antifreeze breaks down over time and forms acids that corrode a vehicle's cooling system. During its use, antifreeze may become contaminated with traces of fuel, metal particles, and grit. Benzene, lead, and other hazardous constituents may cause used automotive antifreeze to be characterized as a hazardous waste. Generators may manage waste antifreeze as a Universal Waste. DES maintains Fact Sheet # WMD-HW-4 "Waste Antifreeze-Management requirements for Handlers and Transporters" available at: www.des.state.us/hwcs/factsheets.htm). The fact sheet outlines handling, storage disposal and on-site recycling of waste antifreeze as well as the waste generated by the recycling process. A listing of off-site antifreeze recycling vendors is also available at: www.des.state.us/hwcs/vendor_lists.htm
9. **Used oil** - Generators can manage and recycle used oil as "Used Oil for Recycle" in accordance with Env-Wm 807 et seq. Used oil that is generated exclusively from automotive oil changes is exempt from an initial used oil determination in accordance with Env-Wm 807.06(b)(7). Used oil that is mixed with hazardous waste or exceeds the off-specification standards should be classified as a hazardous waste. A list of Used Oil Marketers and Transporters is available at; http://www.des.state.nh.us/hwcs/vendor_lists.htm
10. **Waste gasoline** - Waste gasoline that has not been contaminated by non- fuel listed or characteristic hazardous waste is not "hazardous waste" when burned for energy recovery {used as a fuel, which is its intended purpose (See Env-Wm 803.03(c)}. Be advised that burning the waste for energy recovery does not include destruction of the waste in an incinerator.
11. **Waste from floor drains, separators & holding tanks** - Refer to the Floor Drain Guidance Sheet.
12. **Waste automotive batteries** - Waste automotive batteries contain acid which is corrosive (D002) and lead which has a toxic characteristic (D008). Generators my elect to use generator knowledge to manage waste automotive batteries according to Env-Wm 809.02 (store in a manner to prevent breakage/leakage and send for off-site recycling) **OR** as a Universal Waste in accordance with Env-Wm 1100 et.seq.
13. **Waste fluorescent lamps**- Waste fluorescent lamps contain mercury in a vapor form. Generators may use product knowledge to characterize and manage waste fluorescent lamps as a Universal Waste. DES maintains Fact Sheet #WMD-HW-7 "Universal Waste Lamps - Management Requirements for Handlers and Transporters" available at: www.des.state.us/hwcs/factsheets.htm).

*All fact DES sheets described above are available at the NH DES Website at: www.des.state.us/hwcs/factsheets.htm

Waste Mixing

All hazardous waste generators are encouraged to not mix their waste streams. Mixing non-hazardous waste streams with hazardous waste streams may increase generation amounts and change generators status (SQG vs. FQG). Mixing waste streams may also decrease the likelihood that a waste may be recycled and/or may increase the cost incurred for disposal. The mixing of incompatible wastes (hazardous or non-hazardous) may result in a dangerous reaction or emergency situation.

When should hazardous waste determination be performed?

Hazardous waste determinations are best accomplished at the point of generation. However, if wastes are mixed after the point of generation, but before their ultimate disposal, the determination should be made after mixing.

Use of "Generator Knowledge" - Often hazardous waste generators use information that is readily available to them, including Material Safety Data Sheets (MSDS's), to conduct waste determinations. For instance, product "flashpoint" values may be used to determine the characteristics of "ignitability" (Waste Code D001). While MSDS's often provide valuable information, generators must also account for the changes the product material may undergo during use. For example, if a generator disposes of parts water solvent (in product form) with a flashpoint of over 140 degrees Fahrenheit, it may not be an ignitable hazardous waste. However, if, during use, gasoline is incorporated into the solvent, the resultant waste may have a lower flashpoint, thereby making it possess the characteristics of ignitability. And if chlorinated solvents and/or fine metal debris are incorporated into the waste stream, additional hazardous waste codes may also apply. In a similar manner, the same parts washer solvent identified above (flashpoint>140 degrees Fahrenheit), that is diluted before use, may not be hazardous waste when generated.

In summary, generators must account for all of the constituents associated with their waste (different chemicals that make-up the product). If "generator knowledge" does not account for the possible process changes a product may undergo during use, analytical testing should be considered. In addition, an updated waste determination may also be necessary if: 1) the waste has been contaminated or mixed with a hazardous waste; or 2) the products used, or incorporated into the waste, have changed since the last determination.

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

LABORATORIES THAT TEST HAZARDOUS WASTE

The following tests are commonly requested for hazardous waste determinations. Not all of the laboratories listed perform each test. It is important to contact them to ensure the availability of the required methodology ("Test Methods for Evaluating Solid Waste, Physical/Chemical Methods: EPA Publication SW-846, or as specified in the NH Hazardous Waste Rules.").

Ignitability	Extraction Procedure Toxicity (EPTox)
Corrosivity	Volatile Organic Compounds (VOC)
Reactivity	Cyanide (total and amenable)
Pesticides	Acid/Base/Neutral Extractables (ABNs)
Sulfides	Toxicity Characteristic Leaching Procedure (TCLP)

Absolute Resource Associates 124 Heritage Ave, #16 Portsmouth, NH 03801 (603) 436-2001 info@absoluteresourceassociates.com www.absoluteresourceassociates.com	**Accutest Laboratories, Inc.** 495 Technology Center West Marlborough, MA 01752 (508) 481-6200 infoma@accutest.com www.accutest.com	**Alpha Analytical** 8 Walkup Drive Westborough, MA 01581 (508) 898-9220 / (800) 624-9220 (toll-free) info@alphalab.com www.alphalab.com
AMRO Environmental Labs Corp. 111 Herrick Street Merrimack, NH 03054 (603) 424-2022 info@amrolabs.com www.amrolabs.com	**Aquarian Analytical, Inc.** 153 West Road Canterbury, NH 03224 (603) 783-9097 frontdesk@aquarianlabs.com www.aquarianlabs.com	**CDM Smith** 50 Hampshire Street Cambridge, MA 02139 (617) 452-6332 welchje@cdmsmith.com www.cdmsmith.com
ChemServe, Inc. 317 Elm Street Milford, NH 03055 (603) 673-5440 sales@chemservelab.com www.chemservelab.com	**Clean Harbors Environmental Services** 325 Wood Road Braintree, MA 02184 (781) 849-1800 www.cleanharbors.com	**Eastern Analytical, Inc.** 25 Chenell Drive Concord, NH 03301 (603) 228-0525 customerservice@eailabs.com www.eailabs.com
GZA Environmental, Inc. 249 Vanderbilt Ave Norwood, MA 02062 (781) 278-3700 www.gza.com	**Test America** 30 Community Drive Suite 11 South Burlington, VT 05403 (802) 660-1990 info@testamericainc.com www.testamericainc.com	

This is not a complete list of all recycling activities, facilities or vendors available, nor does it imply endorsement from the New Hampshire Department of Environmental Services. They are merely offered as a reference in the search for laboratory testing options.

updated 06/2014 RAK

Common Questions Regarding used oil

Question 1. How do I remove spill absorbent materials, soils and/or debris from the clean-up of used oil spills from my site?

Answer. The absorbents, soils and/or debris are exempt from the Hazardous Waste Rules under Env-Wm 401.03 (b) 17 and considered a solid waste as long as the oil has not been mixed with a listed waste and does not exhibit a characteristic. In some cases, if a generator has detailed information about the waste, his/her knowledge of the waste can be used to make this determination.

Question 2. How should the contents of an oil/water separator be managed?

Answer. The oil that is contained in the skimmer box is subject to a used oil determination, and typically can be managed as used oil for recycle. The water that is in the main holding chamber is exempt from the Hazardous Waste Rules under Env-Wm 401.3 (b) 16 and considered a solid waste as long as the water has not been mixed with a listed waste, does not exhibit characteristic and does not contain greater than 5% oil. If the water does contain greater than 5% oil, it is subject to a used oil determination and may be managed as used oil for recycle.

Question 3. How should an oil/water mixture (not from a separator) be managed if my transporter tells me that they process the mixture either by distillation or separation and ultimately burn the oil for energy recovery or re-refine it?

Answer. The mixture is subject to a used oil determination and may be managed as used oil for recycle. The generator should ensure that the oil is re-refined or burned for energy recovery and the water is discharged subject to an NPDES permit.

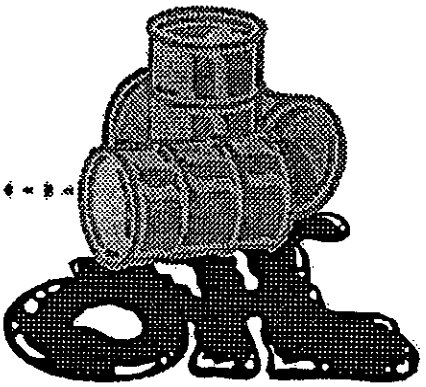
Question 4. How should an oil/antifreeze mixture be managed?

Answer. This mixture can be separated either on-site or off-site. The oil portion is subject to a used oil determination and may eventually be managed as "used oil for recycle". The separated antifreeze may be managed as universal waste. Note: these waste streams may not be intentionally mixed. Doing so would subject the wastes to a full hazardous waste determination, which would include comprehensive analysis.

Question 5. How do I manage diesel fuel, gasoline and used oil?

Answer. Product diesel fuel, gasoline or diesel/gas mixtures can be mixed with used oil for recycle as long as the entire mixture is being burned for energy recovery and you test the oil after mixing with the diesel fuel or gas to ensure that it passes the ignitability (100° F) test for specification used oil. Diesel fuel, gasoline or other fuel cuts that have been used as a solvent (e.g. in a parts washer) must be tested to prove they are not hazardous wastes prior to mixing with used oil.

USED OIL SORBENT INFORMATION SHEET



"Sorbent" - a substance that sorbs (absorbs like a sponge)
"Sorb" - to take up and hold

What are sorbents made of?

Sorbents can be made from many different materials including clay, polyethylene, recycled paper, wool, cotton, cork, sphagnum peat moss, a combination of the above, or anything that will sponge up liquid oil.

How are sorbents sold?

Sorbents are sold in a wide variety of shapes and sizes to meet different needs. The most typical sorbents used at New Hampshire municipal recycling centers are socks pads, pillows, rolls or loose sorbent.

Socks- A sock is most often laid in the path of an active leak. It conforms to the shape of the floor, soaks up oil and also serves as a dike, holding back the flow of oil.

Pads- Pads are usually rectangular in shape. The larger pads may have perforations so they may be torn into a smaller more manageable size. Pads are used to soak up small oil spills. Pads may also be sold pre-cut in circles the size of a drum top. Typically these pads have a two inch hole cut to fit over the bung opening on the drum top.

Pillows- Pillows are similar to pads but are thicker to absorb larger volumes of oil.

Rolls- Sorbent rolls are similar to pads but normally come in 3 or 4 foot wide rolls. Sorbent rolls may be used like a rug or large mat to catch spills or leaks under equipment, or to collect oil off of shoes or vehicles to prevent tracking it throughout the facility. Rolls may also be cut to line a work bench where filters are drained.

Loose- Granular, particulate, or fluff may be sprinkled down in the area of a spill. It usually helps to gently work the sorbent over the area with a broom. When the oil is absorbed the sorbent is collected and properly disposed.

What type of sorbent should I buy?

There are several matters to consider before buying sorbents. When obtaining quotes from sorbent vendors you will want to share or gather the following information:

1. Do you want to clean up only oil or will you likely need to sorb other materials as well?
2. What is the largest volume of oil that could spill at your facility? Do you collect used oil in 55-gallon drums or a large tank?
3. How do you plan to dispose of your used sorbents? (See below)
4. Can you minimize the amount of sorbent you use by purchasing a re-usable sorbent?

(See Pollution Prevention Tips below)

5. Are any of the vendors' products made of recycled materials?
6. Do you have need for a sorbent that will absorb oil but shed water?
7. Do you need a sorbent material that is designed for use out of doors and won't break down in the sun's ultra-violet rays?
8. Discuss any other special needs you may have with vendors. This is a fast changing market and there is likely a custom product to match your situation.

Pollution Prevention Tips -

Contact DES's Pollution Prevention Program for further information at (603) 271-6460 or 1 (800) 273-9469. To make sure that you are creating the smallest volume of oil waste, consider the following tips:

1. Prevent spills by inspecting collection containers for leaks, protect tanks from traffic, use drip pans, and provide spill containment as a back-up. Keep extra drums, plugs and patching materials on hand.
2. When possible, pick up oil without using sorbents. Consider using a squeegee and dust pan, a wet vacuum, or other means of collecting the oil without creating piles of oil soaked sorbents.
3. Select sorbents that are made from recycled materials if you can find one that meets your needs.
4. Select re-usable sorbents if possible. Some are launderable while others are wringable and can be used again and again.
5. Select sorbents that can be burned for energy recovery.

What is the proper way to manage and dispose of sorbents contaminated with used oil?

There is no single, simple answer to this question. Used oil, once spilled and soaked up with sorbents, can no longer be managed as "used oil for recycle". Whenever possible, remove all the liquid oil that you can for recycle, and then use sorbents to clean the area of residues. The contaminated sorbents must be analyzed to determine whether or not they would exhibit a hazardous waste characteristic. If the used oil that is spilled meets the used oil specifications, and does not contain other contaminants, such as antifreeze or gasoline, then the sorbent could most likely be managed as a solid waste, provided it does not contain any free flowing liquids. If the used oil contaminated sorbent exhibits a hazardous waste characteristic, then it must be delivered to a permitted hazardous waste facility. (Contact the Waste Management Division at (603) 271-6424 for further guidance.)