



GUIDANCE REGARDING HAZARDOUS WASTE ISSUES AT DRYCLEANING FACILITIES THAT USE PETROLEUM-BASED SOLVENTS

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All drycleaning facilities, including those that use petroleum solvents, are subject to the provisions of Chapter 376, Florida Statutes, in particular Sections 376.303 and 376.3078. This includes registration, payment of annual registration fees, secondary containment, and spill response.

There are advantages and disadvantages of using petroleum-based solvents as opposed to chlorinated solvents (such as perchloroethylene, aka "perc" and others). The major advantage petroleum has over perc is that the environmental impacts are less costly to remediate after a discharge. On the other hand, petroleum solvents may have a higher potential to cause fires. Wastes from both processes can be hazardous.

The Department of Environmental Protection (DEP) has information indicating a potential for wastes from drycleaning facilities that use "petroleum" as their primary solvent to exhibit a hazardous characteristic. In that case, the wastes require management and disposal as hazardous wastes. The wastes that may be hazardous include, but are not limited to, spent solvent, lint, filters, still bottoms, sludges, and separator water.

(All references to Title 40 of the Code of Federal Regulations (CFR) mentioned in this document have been adopted by the Department as state regulations in rule Chapter 62-730, Florida Administrative Code.)

There are at least five primary ways in which these wastes can meet the definition of hazardous waste.

1. If the drycleaning solvent is a low flash point (FP) petroleum product, such as Quik Dry, Stoddard, mineral spirits, or white spirits, the wastes may be hazardous wastes because they are characteristically ignitable. Their waste code is D001. [40 CFR 261.21] Select a petroleum-based solvent that has an FP of greater than 140 degrees F. Some examples include but are not limited to DF-2000 (FP-147F), EcoSolv (FP>140F), or Shell 140 (FP-145F).
2. If the drycleaning operation frequently uses spotters that contain significant amounts of ignitable components, such as acetone, the solvent may become ignitable with use. At the point of discard the waste code would be D001. Depending on the petroleum-based solvent selected, ensure that the detergents, fabric finishes, stain removers and spotters used are compatible and non-hazardous. The solvent supplier or solvent producer's website are good sources of information for researching and selecting environmentally safe products.
3. If the drycleaning operation uses chlorinated pre-spotters, such as Picrin, the wastes may be hazardous because they contain chlorinated solvents that were used for their degreasing abilities. The waste codes that would apply include D039 and D040. [40 CFR 261.24]
4. If the drycleaning equipment is not well maintained or the still is run too hot, the solvent and wastes can become corrosive. If the pH of the waste is less than 2 standard units (s.u.) or greater than 12.5 s.u., the waste is considered characteristically corrosive with the hazardous waste code of D002. [40 CFR 261.22] **It is of utmost importance that the maintenance and operation of a drycleaning machine be in accordance with the specific directions of the manufacturer to ensure safe, effective and efficient operation.**
5. If the solvents or wastes are even intermittently corrosive, metals from the inside of the drycleaning machine can be dissolved and enter the wastes. For example, chromium, presumably

leached from the steel components of the machine, may be present in concentrations that cause the wastes from the drycleaning operation to be toxic. The waste code would be D007. Other potential sources of metals are fabric dyes and leather tanning chemicals.

If chlorinated solvent spotters have been used, the chlorinated solvents are incorporated into the petroleum solvent. The chlorinated solvents will likely be found in the filters. In addition, data has shown that the filters are likely to have and contain high concentrations of metals, such as chromium. However, testing each filter to determine if the metals are sufficiently low for land disposal would be cost-prohibitive. If you have tested still bottom and your still bottom results do not fail the toxicity test for metals, then you would not have to test the filters. If the concentrations of metals in the filters and the still bottoms are not known and you wish to forgo the option of testing, these materials should be handled as a hazardous waste.

These are not the only possible sources of a hazardous characteristic in petroleum drycleaning solvent waste. Every drycleaner must determine if the wastes from his operation would be classified as "hazardous wastes." This is commonly called a "hazardous waste determination" and is required by 40 CFR 262.11. Specialized testing may be necessary to complete the hazardous waste determination(s). Where the drycleaning operation varies over time in product use, equipment, equipment condition, or procedures, periodic retesting would be essential.

Only firms that have properly registered with the Department and established financial assurance may offer transportation of hazardous wastes. Disposal facilities must be specifically authorized as well. While hazardous wastes are being stored prior to treatment or transportation for disposal, they should be managed in accordance with the requirements for proper container management (closed compatible containers, labels, dating, etc.) found in 40 CFR 262.34. Depending upon the quantity of hazardous wastes generated each month of operation, this is a regulatory requirement or a best management practice.

If a hazardous waste determination is completed and the petroleum drycleaning wastes are not determined to be hazardous wastes, there may be cost-effective alternatives to using a registered hazardous waste transporter and authorized disposal facility. Petroleum drycleaning lint, filters, sludge and spent solvent that have been determined NOT to meet the definition of hazardous waste may be burned for their fuel value.

Separator water from a petroleum drycleaning operation will not have fuel value regardless of whether or not it is determined to be a hazardous waste. The generator may choose to treat the separator water with a commercially available treatment system if the manufacturer warrants it suitable for use for petroleum wastes and if it is operated in accordance with the manufacturer's recommendations. Petroleum drycleaning separator water may be discharged to sanitary sewer if it is properly treated, the local public utility is notified (in writing), and the local utility grants permission. Under no circumstances may separator water from a petroleum drycleaning operation be discharged to storm drain, septic tank, surface water, or ground.

Firms that will provide disposal as hazardous wastes and/or as potential fuels are available at http://www.dep.state.fl.us/waste/quick_topics/database_reports/default.htm or by contacting your local Department office.