

Dry Cleaning Facilities Pollution Prevention Tip Sheet

Waste Streams Generated

Spent solvents (F002, F005, D001)

Separator water (i.e., water removed from the water separator, water generated resulting from steam stripping of Perc from filter cartridges, etc.)(F002, F005, D001)

Spent filter cartridges (F002, D039, F005, D001)

Distillation residues (F002, D039) (Distill filtered solvent to remove oils, fats, greases, etc.)

Cooked powder residues (F002, D039)(Heat muck to recover additional solvent, etc.)

Pollution Prevention/Waste Minimization Tips

Recycling and Reuse of Dry Cleaning Wastes

- a) Directly reuse spent solvent without prior reclamation.
- b) Distill spent solvent to recover pure solvent. Distill filtered solvent to remove oils, fats, greases, etc.
- c) Drain filter cartridges well and store spent cartridges and distillation residues in **closed** containers before shipping to a permitted hazardous waste facility.
- d) Use a water filtration system for Perc-contaminated water that captures Perc through a series of filters that produces clean water and/or steam. The treated wastewater can then be recycled to the process boiler or discharged down the drain. You must verify through testing or by using process knowledge (i.e., equipment specifications, etc.) that all the Perc is removed through the system.
- e) Use nonhazardous chemicals for cleaning.
- f) Water that has been in contact with PCE is a hazardous waste. Whenever possible, reuse it in your dry cleaning equipment. It should never be put into a septic system and should not enter a sewer without the permission from your sewer utility.
- g) Capture PCE vapors vented from your machine and pass them through an activated carbon filter. The PCE is then reclaimed by passing steam in reverse through the carbon filter. However, machines with refrigerated condensers work so well at recovering Perc that adding a carbon adsorber for a newer machine may not be cost effective. Also, carbon adsorption may generate large quantities of wastewater which may be hazardous.

The following dry cleaning unit found in Wyoming contains a dry cleaning still that is used to distill solvent for reuse.



Below is the back side of a dry cleaning machine found at a facility in Wyoming that uses a nonhazardous silicon based solvent for cleaning.



Bibliography

1. Small Business Pollution Prevention, Dry Cleaning and Laundry Operations, A Guide To Hazardous Waste and Used Oil Management In Montana, September, 2004, CD-ROM
2. Dry Cleaning Fact Sheet, Utah Department of Environmental Quality

3. Waste and Emission Reduction Alternatives for Dry Cleaners, Oklahoma Department of Environmental Quality
4. Waste Minimization in Action: Dry Cleaning Bulletin, Hazardous Waste Management Bulletin #6, Hawaii Department of Health