



**Minnesota
Pollution
Control
Agency**

Waste Stream Segregation

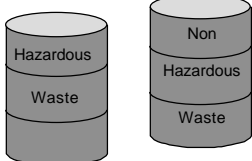
Hazardous Waste Division Fact Sheet #2.63

Waste stream segregation involves handling and storing materials in a way that avoids or prevents the mixing of different waste streams.

Waste stream segregation allows for certain waste streams to be treated, recovered/reused, or disposed of in a more environmentally and often economically sound manner.

Waste stream segregation is an example of a good housekeeping practice.

There are a variety of ways to reduce your company's solvent-waste generation by segregating waste streams. Something as simple as using labeled containers to keep nonhazardous and hazardous wastes separated will prevent a mixture from being classified as hazardous. Or, provide marked barrels for the collection of different used solvents. It is easier to distill and reuse a single solvent waste than a mixture of solvent wastes. Even the removal of sludge from cleaning tanks is a waste stream segregation technique. Frequent removal of sludge will extend the usefulness of the solvent, and make it easier to recycle.

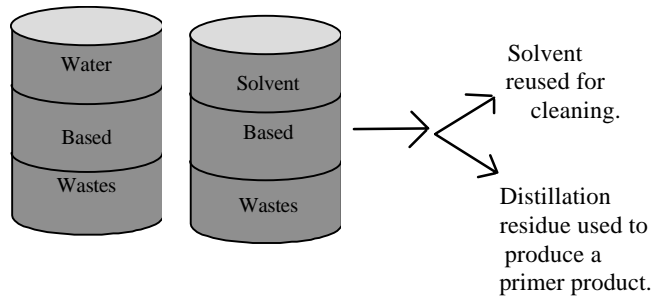


Ideas for Specific Industries

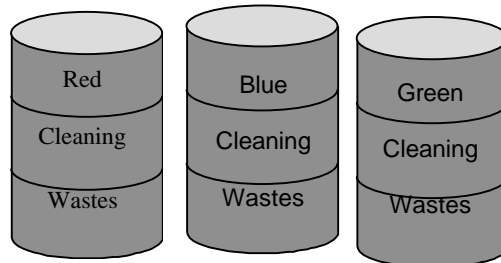
Painting Industries

Segregate paint solids from solvents. If you allow the solids to settle out of the solvent you will extend its usefulness. You can also distill the solvents and reuse them. You can remove the solids from the solvent in three ways:

1. **Decantation** - pass solids to settle to the bottom; pour the solvent layer into a separate container.
2. **Filtration** - pass solvent/solid mixture through a filter to remove the solids; collect solvent in a separate container.
3. **Centrifugation** - separate solvent from solids by spinning the mixture in a centrifuge; pour the solvent into a separate container.



Separate solvent cleaning wastes from different colored batches. These wastes can then be recycled and reused, or perhaps become part of some product formulation.



Paint Manufacturing

A paint manufacturer segregates solvent-based cleanup wastes from water-based wastes. They use the rinse solvents over and over until they are too dirty for direct reuse. Then they distill the solvent and reuse it. The distillation residue is collected and stored in holding tanks. Eventually, the residue is blended with solvents and raw materials to form a primer product.

Vapor-Degreasing Operations

A manufacturer uses 1,1,1-trichloroethane (TCA) and 1,1,1-trichloroethylene (TCE) in two vapor degreasers. Operators collect the different solvent wastes in separate drums. This waste reduction practice benefits the company two ways. First, it helps them determine how much solvent waste is generated by each operation so they can identify where waste reduction practices will have

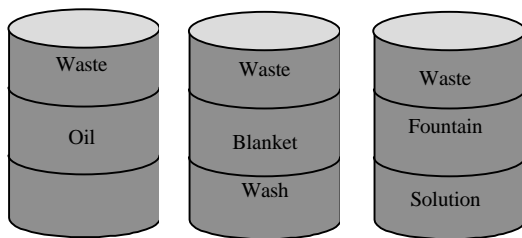
the greatest impact. Second, the wastes can be distilled and reused. If the wastes were mixed, the mixture could not be distilled because the solvents have similar boiling points.

Printing Industries

A printing company collects excess oil at the base of each of two presses. Operators add the oil to a “catch-all” waste stream that includes a flammable blanket wash solvent and a fountain solution. The oil adds 400 gallons annually to the company’s hazardous waste volume.

If the oil had been kept separate, it could be picked up for no

charge, or for a nominal fee. However, as it is, it costs \$1100 per year to dispose of the oil as a hazardous waste. In this case, the potential also



exists to segregate the blanket wash solution wastes and the fountain solution wastes.

Waste Segregation in Action

The Minnesota Technical Assistance Program (MnTAP) worked with a company that generated a large volume of paint wastes (about 25,000 gallons per year). The company assumed that the waste stream was generated by flushing out the paint lines between uses. Upon closer examination of the manufacturing processes, MnTAP personnel identified three sources of the paint wastes:

1. Wastes generated from flushing the paint lines,
2. Unused quantities of paint, and
3. Paint overspray, collected in trays.

Since all three waste streams were mixed together the company had no idea how much waste was generated by each process. If they had known how much waste was generated by each process, it would have been easier to identify areas where waste reduction practices might be implemented, and where they might have the greatest impact.

For more information on waste stream segregation and other waste reduction techniques, please call:

Minnesota Pollution Control Agency
 (612) 296-6300
 (800) 657-3864 toll-free in Minnesota
 Ask for waste reduction information

Minnesota Technical Assistance Program
 (612) 625-4949
 (800) 247-0015 toll-free in Minnesota

We appreciate your comments on this and other MPCA publications.