



# FACILITY POLLUTION PREVENTION CHECKLIST

Pollution prevention, through waste reduction and energy efficient practices, can result in cost savings for businesses, while at the same time protecting environment. The following series of questions is meant to stimulate thinking about possible pollution prevention actions that might be undertaken by many manufacturing facilities. Each set of questions begins with the phrase, "Have you considered..."

## YOUR MANAGEMENT STRATEGY

- developing a usable source reduction plan for your facility?
- training employees to be aware of hazardous waste reduction opportunities?
- accounting for waste treatment and disposal expenses as a direct cost of producing a product?

## WATER USE/REUSE

- flow control valves?
- identifying water inflow and outflow from each unit process?
- evaluating reuse of clean or contaminated water?
- using timers or foot pedals to control water usage?
- reactive rinsing?

## MATERIAL HANDLING

- segregating raw and waste material containers?
- segregating different waste materials in separate containers?
- purchasing materials in bulk or larger containers?
- controlling inventory to reduce waste?
- labeling all containers properly?
- labeling process tanks?

## SOLVENT CLEANERS

- avoiding cross-contamination of solvent?
- avoiding water contamination of solvent?
- removing sludge continuously?
- using a tank cover or air knife to reduce surface evaporation?
- monitoring solvent composition?
- consolidating cold cleaning operations?
- using cryogenic or plastic media blasting for paint stripping instead of solvent stripping?
- using nonchlorinated solvents instead of chlorinated solvents?
- installing a vapor recovery system to capture vaporized solvents?
- installing on-site distillation units?
- evaluating work removal rate?

## ALKALINE/ACID CLEANERS

- removing sludge more frequently?
- avoiding cross-contamination of solvent?
- reusing cleaners by filtering and rejuvenating?

## PLATING/ETCHING/METAL FINISHING

- using low temperature baths to reduce surface evaporation?
- prolonging plating solution bath life through filtration, reducing drag-out, avoiding contamination, etc.?
- using lower concentration plating bath?
- redesigning part racks to reduce drag-out before the rinse, possibly with air blow-off?
- using trivalent chromium instead of hexavalent chromium?
- using noncyanide plating solutions such as chloride or sulfate solutions?
- using in-line recovery techniques?
- regenerating spent bath solutions?
- segregating all waste streams?
- using spray or fog nozzle rinses to reduce drag-out?
- using wetting agents to reduce surface tension, this minimizing drag-out?
- reusing rinse water?
- recovering chrome and nickel plating solutions by an evaporation unit?

## RINSE WATER

- using multiple rinse tanks?
- using countercurrent rinsing?
- installing drainboards and drip tanks?
- installing racks above plating tanks to reduce drag-out?
- using fog nozzles and spray units?
- agitating rinse bath (air or solution agitation)?
- recycling and reusing spent rinse water through such metal recovery techniques as ion exchange, reverse osmosis, and electro-chemical recovery?
- segregating all waste streams?
- using an evaporator for material recovery from rinse tanks and reuse in plating bath?

## PAINT APPLICATION

- using equipment with high transfer efficiency such as electrostatic applicators?
- using high-solids coatings such as powder coatings?
- segregating all waste streams?
- using cheesecloth over filters to reduce spent filter generation?
- recycling over-spray, for instance, from powder coatings?
- evaluating the use of different types of paint arrestors such as water wash and filters?
- arranging formal training for spray operators?
- optimizing spray conditions in terms of speed, distance, angle, pressure, etc.?
- using booth coatings for easy booth cleaning?
- inspecting all parts, such as racks, for cleanliness?
- using gun washer equipment for equipment clean-out?
- reducing the use of solvent-based and metal-based paints, where possible, by using water-based coatings?
- using a charged screen with electrostatic system to reduce edge buildup and to capture and reuse over-spray paint?

## LEAK AND SPILLS

- using seal-less pumps?
- installing spill basins on dikes?
- installing splash guards and drip boards?
- installing overflow control devices?
- maximizing use of welded pipe joints?

## SLUDGE DEWATERING

- using mechanical dewatering devices such as filter presses, centrifuges, vacuum filters, or compression filters?
- keeping different metals sludges segregated?
- using filter bags?
- using sludge dryers?

## PARTS WASHING

- covering all solvent cleaning units?
- using refrigerated freeboard on vapor degreaser units?
- improving parts draining before and after washing?

## OIL/WATER SEPARATION

- using a centrifuge system to cover cutting fluids?
- chemical treatment?
- filtration?
- coolant regeneration?

## GENERAL LIGHTING, HEATING AND WATER

- using fluorescent overhead lamps?
- installing motion detectors for rest room lights?
- trying less expensive lamps for exit signs?
- adding set back thermostat for heating system(s)?
- testing water valves regularly throughout building to eliminate leaks?
- checking for leaks around windows and doors?

**For more information about pollution prevention approaches contact:**

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This fact sheet and related environmental information are available electronically via Internet. Access the DEP website at <http://www.dep.state.pa.us> (choose Information by Subject/Pollution Prevention and Compliance Assistance ).