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**DISCLAIMER**

This workbook provides useful procedures for small businesses to follow, to review and improve compliance with environmental requirements. The workbook is not a comprehensive listing of all environmental requirements that are applicable to all small businesses. A comprehensive list would be dependent on numerous site or case specific evaluations which are beyond the scope of the workbook. The workbook identifies general areas of regulation and further investigation beyond the workbook may be necessary. Completion of any worksheets is no guarantee that the small business has identified or is in compliance with all applicable state and federal regulations. Small businesses using this workbook as a diagnostic tool are urged to use the workbook as a first step in evaluating compliance.

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# 1 GETTING STARTED

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Printers are faced with a dynamic marketplace with constantly changing competitive pressures. Continuing efforts to go “digital” and improve production efficiency have resulted in printing practices where toxics reduction, pollution prevention and recycling have contributed to lower environmental impact. The pursuit to remain competitive has promoted the idea that printers should evaluate the cost of environmental compliance and impact as a bottom line issue. Toxics reduction and pollution prevention offer both direct and indirect cost benefits to the printer, by reducing costs associated with manufacturing and compliance.



**Printers Protecting the Environment**

The printer must identify environmental regulations applicable to their operation or shop and put into place programs, policies and procedures to ensure compliance. The Pennsylvania Department of Environmental Protection (DEP) has the responsibility to enforce regulations and laws that protect the public and the Commonwealth’s natural resources. DEP recognizes that many small print shops lack the resources to identify and comply with regulations. DEP, with help from industry representatives, has developed this workbook to explain in plain English the environmental regulations applicable to the printing industry, especially offset lithographers.

The goal of the workbook is to highlight those environmental regulations that are applicable to all lithographic printers. In most instances, the requirements are fully explained. However, other resources are provided for those regulations that need additional explanation. Appendices in the back of this workbook provide the printer with useful supplementary and contact information to help you comply with the regulations and evaluate Pollution Prevention opportunities.

## 1 POLLUTION PREVENTION - FIRST STEP TO COMPLIANCE

The first step on the road to environmental compliance is to look for opportunities to use fewer chemicals, generate less waste and reduce air emissions – stopping pollution at its source. Why manage wastes when you can eliminate them? Pollution Prevention (P2) techniques can help you reduce your compliance burdens, make your workplace cleaner and safer, increase your competitiveness and save you money.

This section outlines some easy first steps for you to take to prevent pollution. After using these steps to reduce or eliminate pollution as much as you can, move along in the workbook to find out how you must manage your remaining wastes, emissions and discharges to be in compliance. If you need help with Pollution Prevention, call the DEP Office of Pollution Prevention and Compliance Assistance or your trade association for more information. See the Orange Ink Room on page 97.

### WHAT YOU SHOULD BE DOING NOW

The following is a list of general P2 techniques that all printers should already be implementing to manage their health and environmental issues in a responsible manner, find opportunities to reduce chemical use and waste generation and increase their competitive edge.



Make one person (or a person in each department) solely responsible for chemical purchases and inventory control. Purchasing decisions should be based on product performance, environmental and safety requirements, and cost.



Avoid purchasing similar chemical products from different suppliers. Conduct an inventory to reduce the number of chemical products used in your shop. Use multi-task products as much as possible.



Track chemical use and wastes to identify opportunities in material reduction.



Implement best management practices for the storage and handling of stock and other consumable materials. Store chemicals in a secure central location for better control. Do not allow materials to become spoiled or obsolete. Use first-in, first-out management practices.



Examine use of materials by operation (i.e., solvent use when cleaning ink rollers). Are there new technologies that can replace existing process and reduce pollution or waste? You may be able to save money or provide a new customer service.



Clean empty containers as much as practical. Recycle used containers or return them to the supplier or drum reconditioner.



Give employees simple incentives to keep their work areas clean and minimize chemical use. Promote good housekeeping.



Reduce your cleaning solvent usage by improving practices and solvent management. Avoid using flammable (less than 100°F flash point) or F-listed solvents. (See page 79 for a list of F-listed solvents.) Cleaning solvents are a significant factor in Volatile Organic Compounds (VOC) emissions and employee exposure to chemicals.

## **2** USEFUL INFORMATION AND RECORDKEEPING

Before you start developing programs for pollution prevention and environmental compliance, you need to establish a baseline, essentially a snapshot of your shop's efforts to date. You should gather useful information and begin to keep good records to measure your performance in preventing pollution and ensuring compliance.

In order for you to measure your performance in preventing pollution or determining what requirements apply to your shop, you need to know how much material you use and how much waste you generate. **The ratio of wastes to materials (or other similar productivity measure) becomes a self-monitoring performance standard you can equate to relative environmental impact. Generally, a ratio that goes down is an improvement; a ratio that goes up indicates more environmental impact and lower production efficiency.** A good place to start is an inventory of inks, coatings, adhesives, solvents, fountain solutions, film and plate chemistry used on a monthly or annual basis.

DEP requires you to maintain certain records to demonstrate compliance. Below is a general list of records that should be kept on file. Review each section of the workbook for specific recordkeeping

## ***PRINTERS PROTECTING THE ENVIRONMENT***

requirements. A common file system for printers is to keep documents by subject and chronologically within each subject.



Material Safety Data Sheets (MSDSs) for the materials you use. Information on the MSDS can be used to apply for permits, calculate facility emissions, or determine if you must submit reports to DEP.



A VOC and Hazardous Air Pollutant (HAP) emissions inventory (unless you are specifically exempt) for monitoring VOC and HAP emission thresholds. (Emissions above specific thresholds require a DEP permit that should be kept on file.)



Any wastewater and stormwater monitoring data you collect to demonstrate compliance with applicable local, state and federal requirements and permits.



Waste Profile Sheets, manifests, Landfill Disposal Restriction (LDR) forms, and Bills of Lading for shipments of hazardous and nonhazardous wastes.



Records and reports on residual wastes generated, recycled onsite or shipped offsite.



Surveys (i.e., the annual Pennsylvania Community Right-to-Know Survey, etc.) and reports (i.e., hazardous waste biennial report, etc.) sent to DEP.



Copies of correspondence, permits, applications, surveys and reports submitted to DEP. Any correspondence should be sent to DEP as certified mail with return receipt.



Periodic self-audits to monitor and maintain compliance programs.



Any other environmental test results including testing protocols.

How long should you keep your records? The minimum recordkeeping period is one year. However, certain regulations may require records to be kept for three or five years. DEP permits have recordkeeping requirements, usually up to five years. A general rule of thumb – keep all environmental records for at least five years. For hazardous waste manifests, you are required to keep them for three years. Because of generator liability, some companies keep manifests indefinitely.

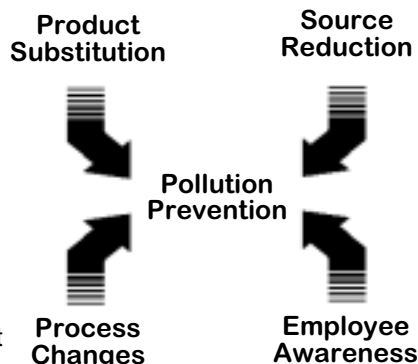
# 2 POLLUTION PREVENTION

## FIRST STEP TO COMPLIANCE

Let's take this opportunity to look specifically at P2 techniques that are applicable to your shop area – prepress, pressroom and postpress. Review the techniques appropriate to your operation and use them to determine how well your existing environmental management practices compare to the other practices in common use in other print shops like yours.

Each category begins with a list of techniques that are low cost, common sense, best management practices that printers have implemented. P2 techniques are then identified in each category that require increasing amounts of capital or employee training to implement. These techniques, while more challenging to implement, have been used by printers to lower costs of compliance and increase their competitive advantage. They may be cost-effective strategies for you to consider, if you have not already. To determine which level of P2 investment is right for you, see pages 68-69 for simple methods to help you calculate the costs and benefits of P2 techniques, including those not-so-obvious costs that impact the workplace and environment and are often hidden in your shop's overhead.

This list is not all inclusive. It is provided to introduce many P2 techniques that have been successfully used by both small and large printers.



### *Prepress Operations (tray processing)*



1. Store temperature and light sensitive chemicals according to manufacturer's directions.
2. Avoid overstock of time-sensitive materials.
3. Recycle photographic film.
4. Look for nonhazardous intensifiers and reducers that do not contain mercury and cyanide salts.
5. For tray processing, use countercurrent washes. Reuse used rinse-water for the initial film wash and fresh water in the last rinse bath. When the last rinse bath needs changing, use it for the initial bath.
6. Use formaldehyde-free photochemistry.
7. Use floating lids on the photochemical hand trays to reduce air exposure and maximize solution life.

## ***Prepress Operations (film, plate, screen)***

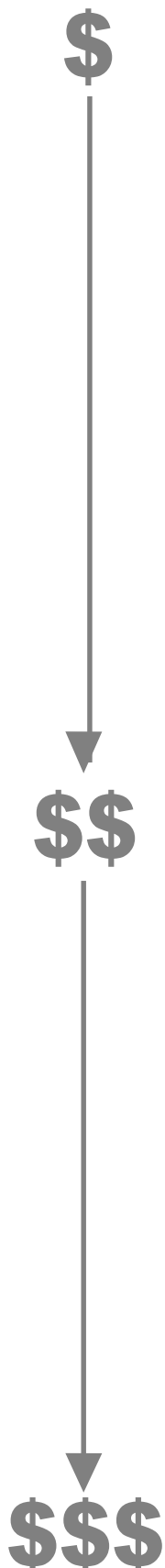
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8. Change processor baths when no longer effective rather than on a fixed schedule. Test with a gray scale.
9. Extend bath life by adding replenishers. (Check silver carryover to the washwater, recirculation of fixer with silver recovery can prevent it.)
10. Limit your exposure to aerosol products. If possible, use only nonhazardous aerosols, pumps or refillable bottles.
11. Set processors according to manufacturer specifications to minimize fresh water use, or install electronic valves for better water management and solution recirculation.
12. Use waterbased plate developers or systems with recyclable chemistry.
13. Calibrate photoprocessor for proper chemical consumption. Periodically check/replace rubber rollers.
14. Install recirculation units for fixer, developer and rinsewater. In-line silver recovery with fixer recirculation system can prolong fixer usage.
15. Install metallic replacement cartridges after electrochemical Silver Recovery Units (SRUs) to collect more silver. Two-stage SRUs can remove up to 99% of the total silver if properly maintained. Use ion exchange columns as a third stage (or for rinsewater), if you have low silver discharge limits.
16. Use waterbased platen and screen adhesives to reduce emissions.
17. Use laser printed, waterbased direct-to-plate or digital prepress systems to eliminate the use of film and plate processing.

## ***Press Operations (general and lithographic)***

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18. Order only the amount of ink you need to do the job.
19. Reuse dirty solvent for the first noncritical cleaning step followed by uncontaminated solvent.
20. Reuse lightly soiled shop towels for noncritical cleaning.
21. Use alcohol-substitutes in the fountain solution.
22. Keep solvents in closed containers and parts washers.
23. Hand wring or gravity drain soiled shops towels to recover as much solvent as possible for recycling. (See page 23 for more guidance.)

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24. Use spray or plunger cans for cleaning solvents
  25. Use spot application of solvents for stubborn ink residues rather than general over application of solvent.
  26. Use spray preservatives conservatively to prevent ink from drying in fountains overnight. *(This technique may result in higher start-up wastes and should be compared to new non-skimming inks.)*
  27. Keep ink containers covered to prevent skin over. Investigate new-non-skimming ink systems.
  28. Scrape as much ink out of containers as possible. Scrape leftover ink from fountains for reuse or blending into black ink.
  29. Use transfer pumps for solvent drums to minimize spillage.
  30. Use petroleum-based cleaning solvents that can be diluted with water before application. Conduct trials to find the best mix.
  31. Obtain state and federal reports, available at agency websites and [www.pneac.org](http://www.pneac.org), on blanket wash effectiveness and factsheets.
  32. Cover ink fountains on web presses.
  33. Use alternative inks, such as vegetable-based inks.
  34. Evaluate and use waterbased cleaning solutions.
  35. Use solvent sinks for cleaning parts to reduce once-used solvent cleaning of press parts.
  36. Take leftover inks and mix them for reuse by using software programs.
  37. Install an explosion-proof centrifuge or dry cleaning units for wringing shop towels dry. *(Cost effective for midsize and large users of towels.)*
  38. Recycle press cleaning solvent using a fully-enclosed solvent recovery system. *(May require a permit to operate.)*
  39. Install ink recycling systems or use vendor mobile systems.
  40. Retrofit presses with automatic blanket washers or purchase new presses with these cleaning systems.
  41. Install a centrifuge or fully-enclosed cleaning system to remove excess free liquid from shop towels. *(This option may require a DEP permit.)*
  42. Use UV-cured inks, electron-beam (ECB) inks or waterbased inks when possible.

## ***Press Operations (gravure/flexographic/screen)***

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43. Use ink thinners with less toxic ingredients.
44. Use more effective, safer emulsion and haze remover products and avoid using degreasers.
45. Reclaim screens immediately after a print run using alternative screen reclamation chemicals.
46. Reclaim waste ink onsite or work out inks using computer software.
47. Enclose or cover ink fountains.
48. Use enclosed or angled doctor blades on rollers.
49. Reduce ink evaporation by using diaphragm pumps that heat inks less than mechanical vane pumps.
50. Install automatic ink jets to keep ink conditions optimal.
51. Use an evaporator to reduce the volume of nonhazardous waste ink or other waterbased materials.
52. Use high pressure water cleaning of screens to eliminate degreasers and emulsion/haze removers. Install a water filtration system for ink particulates. (May also need a DEP permit and emission control equipment for evaporator.)
53. Use waterbased inks with less than 10 percent VOC content. (This may require large capital costs to retrofit presses.)
54. Investigate UV/ECB curing systems.

## ***Postpress Operations***

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55. Use waterbased, animal-based and hot-melt adhesives.
56. Avoid adhesives containing chlorinated solvents.
57. Avoid chlorinated solvents for cleaning adhesive residues. Use alternative petroleum solvents, if possible.
58. Use waterbased coatings, UV varnishes and hot-melt adhesives for in-line and off-line surface coating.

## Solid Waste Opportunities

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- 59. Require vendors to take back unused products.
- 60. Require vendors to use less packaging, provide smaller samples, or take back unused materials.
- 61. Recycle used aluminum printing plates.
- 62. Clean out ink containers as much as practical and, if possible, recycle them.
- 63. Purchase paper stock with preconsumer and postconsumer waste.
- 64. Minimize use of packaging materials for printed product delivered to the customer.
- 65. Recycle all paper wastes. Segregate white and office paper from production paper wastes.
- 67. Recycle waste corrugated cardboard.
- 68. Recycle used or broken pallets.

# 3 AIR QUALITY

While many printers are small lithographic operations, they all emit air pollution and may need to comply with DEP's air pollution permitting and control regulations. This section summarizes the regulations that could apply to your shop. Much of the information in this chapter, especially the permit thresholds, also applies to flexographic, rotogravure and screen printing. However, there are specific control requirements for flexographic and rotogravure operations that are contained in both the state and federal regulations. You should be aware of these requirements.

It is also important to note that Philadelphia and Allegheny counties maintain their own air pollution control agencies and regulations. If your shop is located in either county, you need to contact them to determine what, if any, permit and control requirements apply. See page 97 for county agencies. Because the regulations in both counties must be at least as strict as DEP's, virtually all of the information in this section is applicable. If there are any differences, the county regulations are more strict or have lower permit thresholds.

## IMPORTANT DEFINITIONS

**Actual Emissions** means the amount of a pollutant emitted from each source, such as a press.

**Facility** means all sources of air pollution on contiguous property that is owned or operated by the same entity.

**Hazardous Air Pollutant (HAP)** is a compound, when emitted, is considered hazardous to the environment and public health. There is a list of 188 HAPs. See page 76.

**Nitrogen Oxides (NOx) and Sulfur Oxides (SOx)** are compounds generated from the combustion of fuel oil, liquid propane gas, natural gas, etc. and contribute to smog.

**Potential Emissions (Potential to Emit)** means the maximum capacity of a source to emit a pollutant under its physical and operational design.

**Source** is an individual piece of equipment that emits air pollution, such as a press or stand alone bindery line.

**Volatile Organic Compound (VOC)** is a chemical that when emitted to the atmosphere contributes to smog. These chemicals are regulated by DEP. Acetone, methylene chloride and 1,1,1-trichloroethane are not regulated as VOCs.

## 1 AIR POLLUTION EMISSIONS FROM PRINTERS

All DEP requirements are based on the amount of actual and potential air pollution emissions released.

In lithographic printing, several types of air pollutants emitted are: Volatile Organic Compounds (VOCs), Hazardous Air Pollutants (HAPs), Particulate Matter (PM), Nitrogen Oxides (NOx) and Sulfur Oxides (SOx). (See important definitions.) Most VOCs and HAPs generally come from printing inks (heatset), press cleaning solutions and fountain solution additives. PM generally is paper dust from cutting, folding and binding operations. NOx and SOx are generated from fuel-burning equipment, such as boilers, furnaces and press dryers.

To determine if any requirements apply, you must compile an inventory of the types and amounts of air

pollution emissions from all sources including: inks, coatings, adhesives, press cleaning solutions, boilers and storage tanks. You do not have to include products for incidental use, such as janitorial products. For large printers, film and plate chemistry may have to be counted depending on the quantities used.

## 2 PLAN APPROVALS AND OPERATING PERMITS

Since you release air pollution, you may be required to obtain DEP authorization to install and operate equipment. For many small printers, the emissions are considered de minimis and no authorizations are required. Depending on the amount of actual or potential emissions, DEP authorization may be needed for a single press or for the entire shop.

### MORE IMPORTANT DEFINITIONS

**Plan Approval** is written DEP authorization to begin installing or modifying equipment that emits air pollutants.

**Operating Permit** is written DEP authorization to begin operating new/modified equipment or an entire facility.

**Modified** means equipment or operation changes that increase the amount of air pollution emitted, such as adding a press or coating unit.

Depending on the amount of actual or potential emissions, DEP authorization may be needed for a single press or for the entire shop.

**If you exceed VOC, HAP or NOx thresholds requiring a DEP plan approval or operating permit, you must have DEP authorization before you install or operate equipment.**

### WHAT IF I'M NOT SURE MY NEW PRESS NEEDS A PLAN APPROVAL?

You can submit the form, *Request for Determination of Requirement for Plan Approval*, to DEP. You will still have to calculate your VOC and HAP emissions. DEP will then make a determination on the need for a plan approval. You will receive correspondence from DEP on whether a plan approval is needed.

### WHEN IS A PLAN APPROVAL REQUIRED?

There is a general plan approval exemption for offset lithographic presses with cylinders of 17 inches or less. Any other printing press or emission source may require a plan approval. If you have any other printing operation or larger presses, you should start by performing an inventory of emission sources in your shop to make the determination.

Start by listing all products (inks, coatings, adhesives, fountain solution additives and press cleaning solutions, etc.) used in your shop. From purchase records, estimate the quantity of each product used for the past 12 months. If you intend to modify or install equipment, estimate product usage based on a similar operation you have in your shop or use a worse case scenario according to projected production utilization. Use the VOC and HAP calculation worksheets on pages 74-75 to calculate emissions from lithographic presses and for the whole shop. **For calculating VOCs in nonheatset offset lithographic inks, you can use a 95% retention factor (5% emission factor) to account for the inks oils that remain on the paper. Also you can use a 50% emission factor for cleaning solutions with vapor pressures less than 10 mm Hg at 68°F.**

With this inventory, you can now compare your emissions data with the following plan approval thresholds. Note that the thresholds are different based on: 1) your actual VOC emissions from individual presses and total VOC emissions; and 2) where your shop is located.

## You Need to Get a Plan Approval if:

**For All Heatset,  
Nonheatset Web, and  
Sheetfed Offset  
Lithographic Printing**



Your Actual Press/Equipment Emissions exceed any of the following:

2.7 tons VOC/year  
1 ton HAP/year  
2.5 tons total HAPs/year

**For All Other  
Printing Statewide**



Your Actual Press/Equipment Emissions exceed any of the following:

1 ton HAP/year or  
2.5 tons total HAPs/year

OR exceeds:

8 tons VOC/year for any press/equipment and total  
VOC emissions ≤ 25 tons VOC/year: or  
1 ton VOC/year for any press/equipment and total  
VOC emissions > 25 tons VOC/year

**For all Other Printing  
in Philadelphia Area**

(including Bucks, Chester, Delaware  
and Montgomery counties)



Your Actual Press/Equipment Emissions exceed any of the following:

3 lbs VOC/hour  
15 lbs VOC/day  
2.7 tons VOC/year  
1 ton HAP/year  
2.5 tons total HAPs/year

If a DEP plan approval or an operating permit is required, you must also:



**Submit a Compliance Review Form to DEP summarizing past compliance with air pollution control requirements.**

**Notify your municipality that you are installing a new press.**

**Submit a General Information Form to DEP summarizing the proposed equipment installation/modification or operation changes.**

## WHAT IF I DON'T NEED A PLAN APPROVAL?

If you do not need a plan approval because the emissions from your sheetfed offset lithographic press are below the thresholds listed above, you must:

**Give a 15-day prior written notice to DEP.**

**State in the notice that you will limit VOC emissions or any increase to less than the plan approval thresholds.**

## DO I NEED A STATE-ONLY OPERATING PERMIT?

If you exceed the thresholds below, you must obtain a permit before operating newly installed or modified equipment, such as a press. A permit includes conditions and limits on press operations to

restrict VOC or HAP emissions. It is possible to add or modify a new press or other equipment without obtaining a permit, if the emissions are below the thresholds.

Even if you operate what is called a “grandfathered” press (one installed before September 1971), you must now obtain an operating permit, if you have not obtained one already.

**IMPORTANT**

You must get a plan approval, if applicable, before you install a new or modified emission source, like a press. An operating permit may also be required before you operate the same equipment. You must review the permit thresholds carefully, they are based on Actual Emissions and Potential Emissions (see definitions on page 9), whereas the plan approval thresholds are based on Actual Emissions only. If you need guidance, check DEP’s website ([www.dep.state.pa.us/dep/deputate/airwaste/aq/permits](http://www.dep.state.pa.us/dep/deputate/airwaste/aq/permits)) or call DEP.

**You Need to Get an Operating Permit if:**

**For All Heatset, Non-heatset Web, and Sheetfed Offset Lithographic Printing**



**Your Actual or Potential Emissions exceed any of the following:**

**Any press or group of presses emitting more than 8 tons VOC/year and has the potential to emit less than 50 tons VOC/year. (For Philadelphia, including Bucks, Chester, Delaware and Montgomery counties – potential to emit should be less than 25 tons VOC/year.)**

**Any press or group of presses emitting more than 1 ton single HAP/year and has the potential to emit less than 10 tons single HAP/year.**

**Any press or group of presses emitting more than 2.5 tons total HAPs/ year and has the potential to emit less than 25 tons total HAPs/year.**

**For Printers in Counties with Local Air Programs**



**Call the Allegheny County Health Department or Philadelphia Air Management Services for permit determination.**

**3 MORE ON OPERATING PERMITS**

There are three types of operating permits that can be used for your operations based on your Actual and Potential Emissions.



General Operating Permits for Nonheatset Sheetfed and Web Offset Lithographic Printing



Synthetic Minor Operating Permit



Title V Operating Permit

If you have a small print shop with one or two small presses, you may not have to obtain an operating permit, only a plan approval (page 10). Midsize and large printers generally need an operating permit. As a general rule of thumb, if you, as a sheetfed or nonheatset web lithographic operation, use more than 1,600 gallons of press cleaning solvents and fountain solution additives per year, you need to calculate your VOC emissions to determine the need for an operating permit. Generally, all heatset presses will need an operating permit.

## GENERAL PLAN APPROVAL AND OPERATING PERMITS FOR SHEETFED AND WEB OFFSET LITHOGRAPHIC PRESSES

To simplify the plan approval and operating permit requirements for printers, DEP has developed General Operating Permits for sheetfed and web offset lithographic printing. The General Permits reduce the amount of time and paperwork, and you can apply for a plan approval (page 10) and an operating permit at the same time. By using one of the General Operating Permits, you agree to a standard set of operating conditions to limit the emissions from the new or modified press.

You can apply for and operate a press or group of presses under the General Operating Permit, if your total Actual Emissions for the entire shop are more than 8 tons VOC/year and your Potential Emissions are less than either 25 or 50 tons VOC/year (page 12).

If you install or modify a group of presses at the same time, you can use one general plan approval and operating permit application form for all the presses. If you use the form for one press and later add or modify another press, you must submit a new application form. If you already have a permit, DEP will then add the press to the existing operating permit.

If you use the general plan approval and operating permit application form, you must still file a Compliance Review Form and General Information Form and notify your municipality. See page 11.



### IMPORTANT

The new general plan approval and operating permit cannot be used as a Title V or synthetic minor permit. But it can be used to add a press, if one of these permits has already been obtained. The general plan approval and operating permit cannot be used in Allegheny County.

You may already have an operating permit that was issued under the previous state permitting system and not described in this workbook. When those permit(s) expire, you may have to apply for a new permit depending on your Actual and Potential Emissions.

## WHAT ARE SYNTHETIC MINOR OPERATING PERMITS?

These operating permits apply to printing operations that are not eligible for a General Operating Permit for sheetfed presses and soon to be issued for web presses. Synthetic minor operating permits are for printers that could be major sources because their potential emissions exceed Title V thresholds, but their actual emissions are below the thresholds. They elect to restrict their operations to stay out of the Title V permit program. See pages 70-71 for flow diagrams that illustrate when you must obtain a synthetic minor operating permit.

### TITLE V PERMITS

Very large sources whose air emissions exceed 25 or 50 tons VOC per year as Actual or Potential Emissions, called “major sources”, must obtain a federally enforceable Title V operating permit. A Title V permit includes all emissions sources in your shop, such as presses, coating and binding operations, boilers, emergency generators and storage tanks. Only the largest printers generally need a Title V permit.



If the Potential Emissions from your entire shop exceed any of the levels in both Tables 1 and 2, you must apply for a Title V permit.

If there are pollution prevention opportunities that you can implement in your shop to reduce your emissions and obtain a synthetic operating permit, you should make every effort to do so. The Title V application and approval process is lengthy and resource intensive. You may want to seek a consultant with expertise in obtaining this type of permit.

**Table 1**  
**Major Source VOC and HAP Thresholds for Title V Permits**

Type of Printing	Statewide (except 5-county area around Philadelphia)		Philadelphia, Bucks, Chester, Delaware and Montgomery counties	
	Actual or Potential to Emit	Approximate Material Usage	Actual or Potential to Emit	Approximate Material Usage
<b>Nonheatset Sheetfed Offset Lithography</b>	50 tons VOC/year	7,125 gals cleaning solvent and fountain solution additives	25 tons VOC/year	3,550 gals cleaning solvent and fountain solution additives
<b>Nonheatset Web Offset Lithography</b>	50 tons VOC/year	7,125 gals cleaning solvent and fountain solution additives	25 tons VOC/year	3,550 gals cleaning solvent and fountain solution additives
<b>Heatset Web Offset Lithography</b>	50 tons VOC/year	50,000 lbs ink, cleaning solvent and fountain solution additives	25 tons VOC/year	25,000 lbs ink, cleaning solvent and fountain solution additives
<b>Screen, Flexography, Gravure, Digital</b>	50 tons VOC/year	7,125 gals of solvent-based inks, coatings, cleaning solvents and adhesives or 200,000 lbs of water-based inks, coatings and adhesives	25 tons VOC/year	3,550 gals of solvent-based inks, coatings, cleaning solvents and adhesives or 100,000 lbs of water-based inks, coatings and adhesives
<b>All Printing</b>	10 tons single HAP/year	1,320 gals of any single HAP-containing material	10 tons single HAP/year	1,320 gals of any single HAP-containing material
	25 tons total HAPs/year	3,300 gals of all HAP-containing materials	25 tons total HAPs/year	3,300 gals of all HAP-containing materials

Note: Material usage translators assume that the listed materials account for 90% of all VOC/HAP emissions from the shop. The translators represent 50% of the major source threshold based on material use.

**Table 2**  
**Other Major Source Pollutant Thresholds for Title V Permits**

Pollutant	Statewide	Philadelphia, Bucks, Chester, Delaware and Montgomery counties
	Potential to Emit	Potential to Emit
Carbon Monoxide (CO)	100 tons/year	100 tons/year
Nitrogen Oxides (NOx)	100 tons/year	25 tons/year
Sulfur Oxides (SOx)	100 tons/year	100 tons/year
Particulate Matter (PM)	100 tons/year	100 tons/year

## 4 FACILITY EMISSION STATEMENTS

Some printers are required to report their previous year’s total emissions by March 1 each year. The name of this reporting system is the Air Information Management System (AIMS). The annual reports serve the following purposes:



Allow DEP to track emissions and maintain an accurate inventory of emissions.



Demonstrate that a printer is in compliance with its permit.



Document emission reductions that can be used to offset future growth.

### DO I HAVE TO SUBMIT A FACILITY EMISSION STATEMENT?

You must submit this form if you meet one of the following conditions:



Shops with a Title V operating permit.

- All sources emitting more than 1 ton VOC or NOx must be separately identified on the forms.
- All HAP emissions must be reported and all sources emitting more than 0.5 ton HAPs must be reported separately.



Shops with a synthetic minor operating permit and Actual Emissions, more than 10 tons VOC/year.



Shops that are a non-Title V facility with emissions of VOCs or NOx greater than 25 tons/year.

## 5 DO I NEED A PLAN APPROVAL FOR MY BOILER OR OTHER FUEL COMBUSTION EQUIPMENT?

You may have to obtain a plan approval for combustion units, such as boilers and hot water heaters. If you have a combustion unit and it has a heat input of less than 10 million Btu/hour fueled by natural gas, liquid propane gas or No. 2 fuel oil, it is exempt from the plan approval requirements. For fuel oil fired units, you must have a statement/certification from your oil supplier that it has less than 0.2 % sulfur content in most townships (for some areas it is 0.3% sulfur). Contact your regional DEP office for additional guidance.

For fuel combustion units greater than 10 million Btu/hour and less than 50 million Btu/hour, you can obtain a General Plan Approval and Operating Permit for Small Gas and No. 2 Fired Combustion Units. Here are several salient conditions of the General Plan Approval and Operating Permit.



Authorizes the construction of combustion units using Best Available Control Technology (BACT), such as low NOx burners, flue gas recirculators, etc.



Combustion units constructed before June 9, 1989, must meet certain restrictions on Sulfur Oxides (SOx), Particulate Matter (PM) and visible emissions.



Combustion units constructed after June 9, 1989, must meet certain emission restrictions and recordkeeping requirements.



Combustion units constructed after December 2, 1995, must meet certain NOx and Carbon Monoxide (CO) restrictions.

## 6 DO I NEED A PLAN APPROVAL FOR MY EMERGENCY GENERATOR?

Emergency generators are often exempt from the plan approval requirements. A written exemption is needed and may be granted through the submittal of a Request for Determination for Plan Approval form. Contact your regional DEP office to obtain a Request for Determination form or a plan approval and operating permit for larger generators.

## 7 RISK MANAGEMENT PLANNING?

Section 112(r) of the Clean Air Act requires some printers to prepare a Risk Management Plan to prevent accidental release of toxic chemicals. The risk management planning requirements are discussed in Section 7.

# 4 PRINTER WASTES

Printing operations produce a variety of wastes that have to be managed properly to reduce the impact on the environment and ensure that the printer complies with applicable DEP requirements. For the purpose of complying with federal and state regulations, a printer's waste can be divided into seven categories.



Nonhazardous Municipal Waste



Residual Wastes



Batteries and Universal Wastes



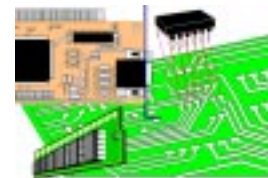
Hazardous Waste



Fluorescent and Mercury Lamps



Waste Oil



Obsolete Electronics and Computers

Each of these waste streams represent a unique challenge to manage. Pollution prevention efforts can reduce and possibly eliminate some wastes. However, you will still be responsible for the proper management and disposal of the remaining wastes.

There are numerous, and sometimes complicated requirements for proper management of your printing wastes. This section highlights the important requirements you should know. From time to time, you may be referred to other DEP documents for more detailed information. If you need more information, call your regional DEP office or trade association.






# 1 Nonhazardous Municipal Wastes

Your printing operations generate solid wastes that consist of a wide range of unusable materials. Some of these wastes are considered nonhazardous and referred to as municipal wastes. (Hazardous wastes are discussed next in more detail.) They include wastes from commercial operations such as: business office and lunchroom wastes; nonmanufacturing wastes; and warehouse wastes not related to product handling. Whenever possible, you should investigate ways to reduce the quantity of municipal wastes that your shop generates. Although one shop alone may not generate a large quantity of municipal wastes, the enormous quantities of these wastes generated by all businesses and private individuals significantly impacts the environment.

Historically, the printing industry has made a commitment to reduce or recycle municipal wastes, such as office paper and buying bulk quantities of office supplies with reduced or no packaging. The economics of the print market will continue to force printers, like yourself, to consistently rethink these waste management issues to reduce your costs.

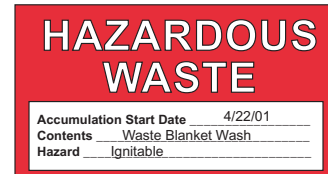


Here are some ways to reduce and manage municipal wastes.

-  Promote reuse and recycling of nonessential materials, such as aluminum cans, glass bottles, office paper, etc.
-  Make each department accountable for their own municipal wastes.
-  Do not mix any chemicals or other regulated wastes with these wastes. It is important to note that industrial liquids are prohibited from landfill disposal.
-  Use plastic reusable/recyclable pallets, whenever possible.
-  Enlist shop employees and suppliers to eliminate excess packaging and overruns.

## 2 HAZARDOUS WASTES

As a responsible business owner, you must manage your hazardous wastes in a safe and environmentally responsible manner. Federal and state regulations place the burden on you, as the generator, to properly identify and dispose of the waste. You retain responsibility even when other companies handle and dispose of your wastes — this is *your* cradle-to-grave responsibility. By choosing products that are less hazardous, you may be able to avoid generating hazardous waste and reducing your corporate liability. Generating less hazardous waste may also reduce the DEP requirements that may apply to your shop.



### How Do You Know It's HAZARDOUS?

As a generator, you are required to determine if a waste is hazardous or nonhazardous. You can do this by: using your knowledge of the process and materials; using available information like Material Safety Data Sheets (MSDSs), labels, or product data sheets; or testing a representative waste sample. A licensed hazardous waste transporter, disposal facility, consultant, or material supplier can have your waste characterized for proper disposal. You should complete a Waste Profile Sheet for each separate waste stream (i.e., inks, solvents, coatings, etc.) describing the waste, and keep it on file. See page 81 for an example Waste Profile Sheet or you may be able to obtain one from your material supplier or transporter.



If changes in your materials or printing operation cause the waste to change, then you are required to reevaluate it to ensure proper classification, handling and disposal. Some transporters and disposal facilities may also require you to reevaluate your wastes on a periodic basis.

### TYPICAL PRINTING WASTES

Most hazardous wastes generated in the printing industry are classified ignitable. Some printer wastes may also be corrosive, toxic or listed. Hazardous wastes generated by printers include: untreated spent fixer, press cleaning solvents, some speciality inks and solvent-based coatings, adhesives and their solvent cleaners.

Nonheatset lithographic inks are generally not regulated as hazardous, unless they are mixed with press cleaning solutions. The transporter will require you to test a representative sample of the waste ink to prove that it is nonhazardous. You should have a Waste Profile Sheet and the necessary test results for the waste ink to show DEP that it is nonhazardous.



### F-LISTED SOLVENT WASTES

Some printers also use “F-Listed Solvents” in their inks or for press cleaning activities. F-Listed Solvents are solvents specifically listed by the EPA and DEP as hazardous waste when disposed. See page 79 for a list of F-listed Solvents. If solvent’s concentration is 100% or greater than 10% or more in combination with other listed solvents, then the waste solvent (or mixture) is regulated as hazardous. Because of their special listing, these wastes (and their ingredients, especially chlorinated solvents) may be more costly to dispose.

If possible, avoid using these solvents because of their toxicity. Whenever possible, substitute with petroleum naphtha solvents. Most F-Listed Solvents are also considered Hazardous Air Pollutants and may be regulated as an air emission. Refer to page 76 for more information on air emissions and Hazardous Air Pollutants.

## HOW DO I DETERMINE MY GENERATOR STATUS?

First, you must determine how much hazardous waste you generate each calendar month. Use a table like the one shown in this example to help you determine your monthly generation rate.




### Hazardous Waste Generated by Cyan Printing Company

Activity	Waste	Hazardous?	Why?	Monthly Amount (gal)
Prepress	Untreated fixer	Yes	Toxic (> 5 ppm silver)	15
Pressroom	Waste cleaning solvents	Yes	Ignitable (FP* < 140°F)	20
Pressroom	Waste lithographic ink	No	Not toxic or ignitable	not counted
Pressroom	Waste speciality inks	Yes	Ignitable (FP* < 140°F)	3
Postpress	Waste solvent adhesive	Yes	Ignitable (FP * < 140°F)	5
			<b>Total Hazardous Waste Generated (gal/month)</b>	<b>42</b>

\* Flash Point

To determine your hazardous waste requirements, you must select a generator category. In our example, Cyan Printing Company would be classified as a Small Quantity Generator of hazardous waste. Cyan Printing Company generates approximately 40 gallons of hazardous waste each month. In some months, the company may generate more or less hazardous waste. Cyan Printing Company should use the highest monthly generation rate in determining their generator status.

### Hazardous Waste Generator Status

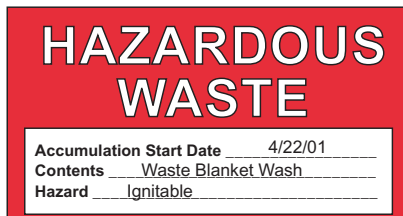
- Large Quantity Generator (LQG)**  generates more than 2,200 lbs/ month or approximately 270 gal/month (~4-5 drums)
- Small Quantity Generator (SQG)**  generates between 220 lbs/ month and 2,200 lbs/month or approximately 27 gals - 270 gals/month (~1/2-4 drums)
- Conditionally- Exempt Small Quantity Generator (CESQG)**  generates less than 220 lbs/ month or approximately 27 gal/month (~1/2 drum)

If your generator status changes for hazardous waste, you must submit a subsequent Hazardous Waste Notification to DEP. Be advised that frequent changes in generator status are not permitted. Select the highest generator status, even if you are in a lower category some of the time.

## DO I NEED A GENERATOR ID NUMBER?

If you are a SQG or LQG, you must have a unique site-specific hazardous waste generator ID number for shipping hazardous waste. The ID number is used on the shipping papers (manifest). If you do not have an ID number, call DEP at (717) 787-6239 to obtain a Hazardous Waste Notification Form and get a generator ID number. A link to obtain a Notification Form is also available on DEP’s website. When you move your shop, then you must obtain a new generator ID number for the new location, if it does not already have one. Remember, ID numbers are site-specific.

## HOW SHOULD I LABEL HAZARDOUS WASTE?



Containers and tanks of hazardous waste must be labeled at all times. Label each container or tank: as “Hazardous Waste”; the name of the waste (e.g. waste presswash) or use the proper USDOT shipping name; and the hazard (whether it is ignitable, toxic, or corrosive). The label should be prominently displayed on the drum and tank, so it is easily visible. Be sure it does not get faded, weathered, or obliterated. If it does, replace the label. Use the example label here, or the “EPA Yellow Label” typically used by licensed transporters is acceptable.

Depending on where the drum is located and filled in your shop, an Accumulation Start Date may also be required. See Figures 1 and 2 for more information on how to date drums of hazardous waste.

## GENERAL HAZARDOUS WASTE REQUIREMENTS

Regardless of your generator status, you must do the following to safely manage hazardous waste in your shop.



**Perform a hazardous waste determination on all wastestreams.**



**Label all containers of hazardous waste to accurately identify the contents.**



**Ensure delivery to a permitted treatment, storage and disposal facility.**



**Use DOT approved drums and containers for offsite shipments.**

Do not mix hazardous wastes and nonhazardous wastes. The resulting mix of wastes is generally regulated as hazardous.

You may have hazardous waste with a flash point of less than 100°F. According to federal OSHA requirements, containers containing these wastes must be electrically grounded when material is added or removed. This also applies to virgin materials with low flash points. For guidance on this issue, contact your local Fire Chief.

Do not accumulate your hazardous wastes outside and exposed to the elements. Additional accumulation requirements apply to outside hazardous waste accumulation and storage. (If you elect to accumulate hazardous wastes outside, call DEP for guidance.) In addition, you will likely need to obtain a stormwater discharge permit from DEP. For more information on stormwater discharges, see page 46.

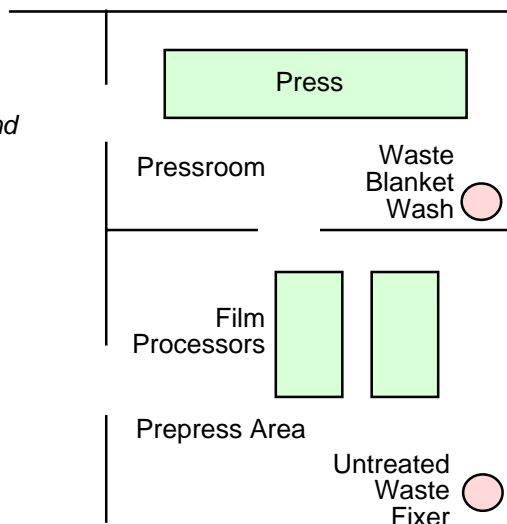
## ACCUMULATION OF HAZARDOUS WASTES

You are allowed to accumulate hazardous waste in the work area where hazardous waste is generated, for example, the pressroom or prepress area. (This is called a Satellite Accumulation Area. See Figure 1.) You are limited to 55 gallons of hazardous waste in this area (i.e., waste blanket wash or waste ink). When a Satellite Accumulation Area container is full, it must be moved to the main Hazardous Waste Accumulation Area. See Figure 2.

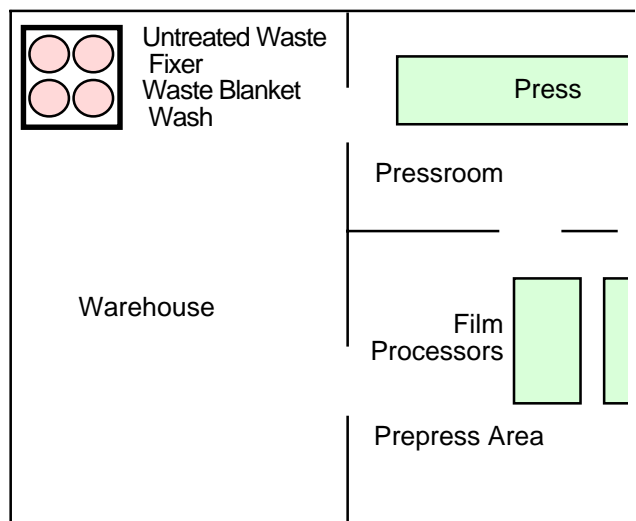
Depending on your shop's size, you may elect to accumulate hazardous waste both ways. Here are the requirements and example layouts for hazardous waste accumulation in a print shop.

### Figure 1 Satellite Accumulation Requirements

- Locate containers close to the point of hazardous waste generation.
- Ensure that hazardous waste containers are compatible with their contents. *(In general, use steel drums for inks and solvents, and plastic drums for waterbased wastes.)*
- Label containers accurately to identify their contents. See page 21.
- Keep containers closed, clean and in good condition.
- Take up to one year to fill the container.
- Date containers, when it is full. (This is the Accumulation Start Date.)
- Move the full container to your Hazardous Waste Accumulation Area or ship offsite within three days of Accumulation Start Date.



### Figure 2 Hazardous Waste Accumulation Requirements






- Provide a containment system to collect spills and leaks.
- Label and date container when the waste is first placed in the container. (This is the Accumulation Start Date.)
- Keep containers closed, clean and in good condition.
- Regardless of whether the container is full or not, ship offsite before the time limit or maximum drum quantity is reached. See next page for more information.
- Post a warning sign. See page 82 for example sign.

## ACCUMULATION START DATES AND TIME LIMITS

DEP restricts the time and quantity of hazardous waste you can accumulate. The Accumulation Start Date is used to determine the period of time you have to accumulate the waste before shipment. The time and quantity limits are based on your generator status as follows.

### Hazardous Waste Accumulation Limits

Large Quantity Generator (LQG)		90 days, no limit on quantity
Small Quantity Generator (SQG)		180 days (270 days if shipped > 200 miles), maximum of 13,200 lbs or ~30 drums
Conditionally-Exempt Small Quantity Generator (CESQG)		maximum 2,200 lbs or ~4 drums for no more than one year

If you exceed the quantity limits, you must renotify with the EPA ( page 21) and comply with the additional requirements of the next higher generator status (e.g., go from a CESQG to a SQG).

## HOW DO I HANDLE MY SOILED SHOP TOWELS?

There are two types of cleaning towels used by printers:

- Disposable wipes that are shipped offsite as waste.
- Reusable shop towels that are returned to a commercial laundry under contract.

Nonhazardous wipers can be disposed as residual waste. You are required to show that the wipers are nonhazardous – usually this is done through laboratory tests.

You cannot send reusable shop towels to a commercial laundry with excess solvent or ink. They must not be saturated with waste solvent and must pass the paint filter test (EPA SW846, Method 9095). Otherwise, they have to be managed as hazardous waste.

Air drying is not allowed because it releases pollutants into the workplace and the environment. Therefore, you should make every effort to minimize excess hazardous waste solvent or ink on shop towels. You can gravity drain excess solvent in a drum with a false bottom to collect the solvent. When the shop towels are picked up, empty the excess solvent for reuse or proper disposal as hazardous waste.






Do not pour waste ink or solvent onto shop towels. Always store soiled shop towels in closed containers. Employees should be trained to dispose of inks and solvents in designated containers. You should also train press operators not to use reusable shop towels to line ink trays. Scrape excess ink off press parts and ink fountains before cleaning with shop towels or disposable wipers.

## SHIPPING HAZARDOUS WASTE

You will need a licensed hazardous waste transporter to remove your hazardous waste. Each shipment of hazardous waste must be accompanied by a manifest. Contact DEP on how to obtain manifests or your transporter may provide you with preprinted manifests as a customer service.

The printer is responsible for distributing the manifest copies to their appropriate destinations. In some cases, transporters and disposal facilities will distribute the copies as a customer service. See below on where to send the manifest copies. As a generator, you must always retain at least one copy of the manifest at the time of waste shipment.






Instate Disposal Facility		Copy sent to DEP and another to generator.
Out-of-State Disposal Facility where that state does not require a manifest (use Pennsylvania manifest)		Copy sent to DEP and another to generator. Copy sent to destination state, if required. (Check with transporter or disposal facility.)
Out-of-State Disposal Facility (using out-of-state manifest)		Follow manifest instructions and send the generator state copy to DEP. (If no generator copy is available, send generator, first transporter and facility-signed manifest copies to DEP.)

The facility receiving your hazardous waste will send you a facility-signed copy of the manifest. (If you do not receive a copy within 35 days of the waste shipment, contact the facility and then call your regional DEP office. If after 45 days of the waste shipment, you still do not have a copy, send a letter to DEP summarizing your efforts and include a copy of the missing manifest in question and request assistance.) Staple your original copy and the facility-signed copy together and place in a file.

SQGs and LQGs must also sign and keep a copy of the Land Disposal Restriction Form (a form for hazardous waste landfill disposal provided by the transporter). This is optional for CESQGs with transporter contracts for routine offsite waste shipments (such as routine pickups of waste solvent from a parts washer). This form should be stapled to the manifest.

## **EMERGENCY RESPONSE FOR SQGs AND LQGs**

To reduce the risk of fire, explosion, or spill of hazardous waste, SQGs and LQGs are required to have the following:

-  **Designate an Emergency Coordinator. Should an emergency situation arise, the Emergency Coordinator must be prepared to react quickly.**
-  **Have a telephone or communication system to alert employees in an emergency. Post the emergency phone numbers and name of the Emergency Coordinator next to the telephone. (*It is preferred that the telephone be near the area where hazardous waste is generated or accumulated.*)**
-  **Post evacuation route maps and exit signs in areas where hazardous wastes are handled or stored.**
-  **Have portable fire extinguishers and/or water supply for fires. Ensure adequate water pressure for the sprinklers. (*Adequate water pressure can be determined during the annual sprinkler test required by OSHA and local fire departments.*)**
-  **Make arrangements with local agencies to respond to an emergency at your shop. (For more information on this issue, see page 25.) Document your efforts if they elect not to respond to your request or refuse to provide services.**

## SQG & LQG REQUIREMENTS FOR EMERGENCY RESPONSE

SQGs and LQGs of hazardous waste must also prepare a written Preparedness, Prevention and Contingency Plan (PPC Plan). This plan outlines the responsibilities of key employees and procedures to follow in the event of a fire, explosion, or spill involving hazardous waste. *(OSHA requires you to have a similar plan, an Emergency Action Plan, for all hazardous substances used at your shop. If your PPC Plan/Emergency Action Plan addresses both hazardous substances and hazardous waste, you can meet both requirements with one plan.)*

Here is a sample Table of Contents for a typical PPC Plan. In preparing this Plan, you should format it to make revisions easier. Put equipment lists, phone numbers, and floor plans, etc. on separate pages for easy updating. You should review the plan at least annually to make sure it is current, when equipment/procedures change, or if you implement the plan and any of the procedures prove inadequate.

### PPC PLAN - TABLE OF CONTENTS

- Section 1 - Purpose of Contingency Plan
- Section 2 - Emergency Coordinators
  - Responsibilities
  - Names and phone numbers
- Section 3 - Preparedness & Prevention
  - Available Emergency Equipment Descriptions and List *(address checklist items on previous page)*
  - Spill Cleanup Equipment & Location
- Section 4 - Response Procedures
  - Spills, Fire & Explosions
  - Natural Disasters
  - Medical Attention
- Section 5 -Evacuation Procedures
  - Evacuation Routes (provide plans)
  - Refuge Areas & Headcounts
  - Coordination with Local Agencies
- Section 6 - Plan Amendments
  - Procedures to Amend Plan
  - Sending Updates to Local Agencies
- Section 7 - DEP/EPA Notification Procedures
  - Reporting Thresholds & Followup Procedures
- Appendices
  - Emergency Equipment Location Maps
  - Evacuation Route Maps
  - List of Emergency Phone Numbers for Emergency Coordinator & Local Agencies

You must make arrangements with local agencies to respond to an emergency at your shop. To comply with the DEP requirements, you can send them a copy of the PPC Plan with a cover letter requesting their assistance in an emergency and provide written acknowledgment. If you do not hear from the agency or they refuse, make a note and attach it to your plan or keep it in a file.

Remember, send revised copies of the PPC Plan (or the revised pages) to the agencies when you update it.

## SQG & LQG Requirements for Employee Training

SQGs and LQGs of hazardous waste must prepare a written Training Plan. This plan outlines procedures for training employees to properly handle hazardous waste.

Each employee must be trained according to their responsibilities for handling hazardous waste. They must be trained within six months of hire or change to a new position. Untrained employees must be supervised until training is provided.



Here is an example Table of Contents for a typical Training Plan. The plan should address hazardous waste responsibilities according to job title. Staff employees need job-specific training, while managers who oversee hazardous waste management need more comprehensive training. This training can be done onsite or offsite, as long as it covers the required subjects and wastes generated in your shop. Training must be provided and documented annually.

Training records must be kept for as long as you generate hazardous waste at your shop.

<p><b>TRAINING PLAN - TABLE OF CONTENTS</b></p> <p>Section 1 - Purpose of Training Plan</p> <p>Section 2 - Initial Training by Job Responsibility</p> <ul style="list-style-type: none"> <li>Types of Hazardous Waste Handled</li> <li>Potential Physical &amp; Chemical Hazards</li> <li>Personal Protection</li> <li>Manifests</li> <li>Communications</li> <li>Inspection, Repairing and Replacing Emergency and Monitoring equipment</li> <li>Equipment Shutdown</li> <li>Emergency Equipment &amp; Response Procedures for Fire, Explosion, and Spills.</li> <li>Response Procedures for Groundwater Contamination Incidents</li> </ul> <p>Section 3 - Annual Refresher Training by Job Responsibility</p> <p><i>(Review of Subjects Above and any Changes)</i></p> <p>Appendices</p> <ul style="list-style-type: none"> <li>Job Title and Description of Each Position Related to Hazardous Waste Handling and Accumulation</li> <li>A List of Employees Currently Holding Each Position</li> <li>Training Records</li> </ul>
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**LQGs & SOURCE REDUCTION STRATEGIES**

If you are an LQG, you are also required to prepare a written Source Reduction Strategy Plan for hazardous waste generated at your shop. See example Table of Contents. This written strategy is a plan that describes the procedures to monitor and reduce, whenever possible, your hazardous waste. Reduction strategies must be prepared for any hazardous waste generated in quantities greater than 2,200 lbs/month.

The plan must be kept on file and updated at a minimum, every five years or whenever there are significant changes (e.g., you add or eliminate a wastestream).

<p><b>SOURCE REDUCTION STRATEGY PLAN - TABLE OF CONTENTS</b></p> <p>Section 1 - Purpose of Strategy</p> <p>Section 2 - Project Reduction Goals</p> <p>Section 3 - Description of Hazardous Wastestreams</p> <ul style="list-style-type: none"> <li>For each Wastestream over 2,200 lbs/month</li> <li>Wastestream Characterization</li> <li>Description of Source Reduction Options</li> <li>Description of Options Evaluated</li> <li>Explanation as Why Options Were not Evaluated</li> </ul> <p>Appendices</p> <ul style="list-style-type: none"> <li>Any Supporting Documents</li> </ul>
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**HAZARDOUS WASTE PERMITS**

If you are an SQG or LQG, you are required to notify the DEP for recycling hazardous waste onsite. (CESQGs are exempt from the permit requirements for recycling their own hazardous waste.) Any physical or chemical treatment of a regulated hazardous waste requires either a DEP-issued permit or "Permit-By-Rule". Contact you local DEP office for further information.







Hazardous waste recycling activities may be classified as “processing” and require you to follow additional waste management and recordkeeping requirements. By notifying DEP and following these requirements, you are said to have a “Permit-by-Rule” even though you do not actually receive a permit from DEP. (However, larger and more sophisticated recycling systems will require a DEP permit.) For example, a vendor that comes onsite and performs ink reclamation, leaving you with reclaimed ink and ink sludge (for disposal), can be carried out under a Permit-by-Rule.

Contact your regional DEP office for guidance, if you plan to conduct hazardous waste recycling activities at your shop.



## SUMMARY OF GENERATOR REQUIREMENTS

Here is a summary of hazardous waste requirements according to generator status. For more detailed information, refer to the discussions on pages 19 to 26.



### ALL GENERATORS MUST

-  Determine whether your wastes are hazardous and accurately characterize each waste. See the example Waste Profile Sheet on page 81.
-  Determine your hazardous waste generator status.
-  Obtain your site-specific generator ID number. *(Not required for CESQGs.)*
-  Accumulate your hazardous waste in accordance with Figures 1 and 2. You must label all containers.
-  Keep a record of where your hazardous waste is shipped. Keep the manifests and receipts on file for at least three years. Land Disposal Restriction (LDR) forms must be kept for five years. *(It is recommended that the records be kept indefinitely.)*
-  Obtain a DEP permit before any hazardous waste treatment or recycling is conducted in your shop. You may be able to comply with the Permit-By-Rule requirements. See previous page.

### CONDITIONALLY-EXEMPT SMALL QUANTITY GENERATORS MUST

-  Do all of the above requirements, AND
-  Accumulate no more than 220 gallons or 2,200 lbs (~4 drums).

### SMALL QUANTITY GENERATORS MUST

-  Do all of the above requirements, AND
-  Accumulate no more than 13,200 lbs of hazardous waste in tanks or containers (~28 drums) at any time.

- Conduct weekly inspections of hazardous waste storage areas. *(It is strongly recommended that you maintain a log of the inspections.)*
- Ship hazardous waste offsite within 180 days of the accumulation date or 270 days if sending > 200 miles offsite.
- Prepare for emergencies and conduct employee training.
- Prepare a written Preparedness, Prevention and Contingency Plan and Training Plan as described on page 25.

### LARGE QUANTITY GENERATORS MUST

- Do all of the above requirements, AND
- Ship hazardous waste offsite within 90 days of the accumulation date on the tank or container. There is no limit on the quantity of hazardous waste stored at any time.
- Prepare a Source Reduction Strategy for each hazardous waste you generate.
- Submit a Hazardous Waste Generator Biennial Report every even numbered year to DEP/EPA.

### ALL GENERATORS SHOULD

- Remove excess solvent from shop towels before sending to a commercial laundry.
- Segregate shop towel containers from other waste containers. Do not use shop towel containers to dispose of hazardous wastes.

### 3 WASTE OIL

Lubricating oils are used in presses, bindery equipment, building environment equipment (e.g., air conditioning units) and motor vehicles. From time to time, the equipment may require maintenance and oil changes. Oil leaks may occur or you may have a small oil spill that requires cleanup. Oil from these sources is regulated as waste oil (also referred to as used oil).

DEP has requirements for waste oil generators, transporters and disposal facilities. As a generator, you are required to do three things.



Classify the oil as waste oil by your knowledge or laboratory tests.



Manage the waste oil properly at the site of generation.



Send the waste oil offsite for recycling or energy recovery.

#### IMPORTANT DEFINITIONS

**Waste Oil**, also known as **Used Oil** under federal regulations, is any oil refined from crude or synthetic oil that can no longer be used for its original purpose, (i.e., it is contaminated with physical or chemical impurities).

**Recycling** means reconditioned onsite for reuse, re-refined into comparable product for reuse at a refinery, or burned for energy recovery.

**Energy Recovery** means the burning of waste oil to generate heat or power.

**Fuel Blending** means waste oils from different generators are mixed into a usable fuel for industrial boilers by a permitted facility.

**Oil-fired Space Heaters** are small onsite heating units of less than 0.5 MMBtu/hour capacity. These units are vented directly outside the building.

**Ignitable Hazardous Waste** means a hazardous waste with a flash point below 140°F.

**Absorbent** means a material or article designed to soak up free liquid, such as oil leaks, for the purpose of disposal. It can be in the form of a granular material, spill pillows, pigs, pads, etc.

**Oily debris** means any type of material contaminated with oil, including absorbent, disposable wipers, soil, personal protective equipment, etc.

#### WHAT IS WASTE OIL?

Waste oil is an oil product that has been used for its intended purpose and for whatever reason can no longer be used. During normal use, impurities such as dirt, metal scrapings, or water can get mixed in with the oil. After continual use, additives in the oil can break down or the oil loses its viscosity and lubricating properties. The oil no longer performs well and is replaced with virgin or re-refined oil to do the job.

#### TYPICAL WASTE OILS

Waste oil comes from a variety of sources. Here are some of the types of oil typically found in a print shop.

- Press Oil
- Compressor Oil
- Engine Oil (vehicles or generators)
- Transmission Fluid
- Hydraulic Fluid
- Machine Lubricating Oil

## WHAT OILS ARE NOT WASTE OILS?

There are certain types of oils that are not regulated as waste oil. These include:

Oily Materials	Waste Oil	Hazardous Waste	Residual Waste <small>(see page 39)</small>
Nonhazardous residual oils from storage tanks that are reused as is	No	No	No
Virgin fuel oil spill cleanups (free product and not contaminated materials)	No	No	No
Products such as used antifreeze and kerosene	No	Kerosene - Yes Antifreeze - Possibly	Yes
Vegetable and animal oils	No	No	Yes
Petroleum products used as cleaning solvents. (classified as either hazardous or residual wastes)	No	Possibly	Yes

Oils that do not meet the definition of a waste oil can still pose a threat to the environment if not properly disposed. Used antifreeze, kerosene, and used cleaning solvents may be regulated as hazardous wastes. To minimize your liability as the generator of these oils, you should work with a licensed transporter to characterize the oily wastes to ensure proper disposal.

## MIXING WASTE OIL WITH HAZARDOUS WASTE

According to the hazardous waste regulations, if you mix a nonhazardous waste with a hazardous waste, the resulting waste mixture is still regulated as hazardous. Waste oils mixed with certain hazardous wastes may continue to be regulated as waste oil. If you need additional guidance on this issue, contact your regional DEP office.

## HOW DO I HANDLE MY WASTE OIL?

If you generate waste oil, there are certain good housekeeping practices (also called management standards) that you must follow. These management standards are common sense, good business practices that ensure the safe handling of waste oil, promote recycling, and reduce the impact on the environment. These standards apply to all generators of waste oil, regardless of quantity handled.

These standards relate to accumulation of waste oil.



**Label all tanks with *Waste Oil*.**



**Label all containers with Waste Oil (or Used Oil, if being transported in these containers to a facility outside Pennsylvania where Used Oil labels are required).**



**Keep containers and tanks in good condition to prevent spills and leaks. Ensure that the container or tank materials are compatible with the waste oil. Do not store waste oil near floor or storm drains.**



**Do not accumulate waste oil for more than one year. There is no quantity limit. However, do not accumulate large quantities of waste oil.**

These standards relate to waste oil leaks and spills.



**Keep equipment, containers and tank in good condition and be careful when transferring virgin and waste oil. Have absorbent materials available.**



A very simple, common sense Preparedness, Prevention and Contingency (PPC) Plan should be developed.



**If you discover a spill or leak, control the oil at its source. If necessary, transfer the oil to another compatible container or tank.**



**Contain the spilled oil with absorbent or booms (pillows, pigs, etc.). Surround floor drains, storm drains, or other conveyances with absorbent or booms to prevent migration of oil.**



**Clean up the oil and recycle the waste oil as you would have before it was spilled.** *(If recycling is not possible, you then must determine if it is classified as a hazardous waste or residual waste to ensure proper disposal.)*



**Remove, repair or replace the defective container or tank. You may also be required to notify DEP. See page 62 for more information on release reporting.**

## HOW DO I HANDLE OILY DEBRIS?

Oily debris includes waste materials and soil contaminated with waste oil. These wastes can be handled as residual wastes. See page 39 for more information on residual wastes. Examples of oily debris that may be handled as residual wastes are:



Used absorbent contaminated with oil, but dry to the touch.

Personal protective equipment slightly contaminated with oil.

Some cleanup materials.

Absorbent booms or pigs are manufactured to absorb more than their weight in oil. That means free-flowing oil can be squeezed from them. As a rule of thumb, you are required to handle these cleanup materials like waste oil, unless tested and otherwise found unsaturated. Any other waste materials with free-flowing oil must be handled like waste oil and collected for proper disposal. See page 30 for accumulation and handling requirements.

**I'm a hog for waste oil.**



## WHAT ABOUT OIL-CONTAMINATED SHOP TOWELS?

You can send oil-contaminated shop towels to a commercial laundry, if they are not saturated with free-flowing oil. See page 23 for a discussion on soiled shop towels. Disposable wipers are handled like oily debris. If they have free-flowing oil, they must be handled like waste oil, collected in a container and transported by a waste oil transporter. Dry wipers can be discarded as a residual waste. For more information on residual wastes, see page 39.

## WHAT ABOUT OILY WASTEWATER?

Water and wastewater contaminated with less than one percent or nonrecoverable quantities of waste oil are excluded from regulation as waste oil.

You may be allowed to discharge water contaminated with nonrecoverable quantities of waste oil from routine cleaning activities to the municipal sewer. Most municipalities require you to obtain approval for wastewater discharges to the sewer. See page 44 for more information. Any water or wastewater contaminated with recoverable quantities of waste oil must be handled as waste oil.

## HOW DO I SHIP WASTE OIL AND OILY DEBRIS?

You are required to use a waste oil transporter to ship waste oil to a waste oil transfer or processing facility or waste oil burner, with one exception. A waste oil generator can transport up to 55 gallons of waste oil to an approved waste oil collection center. The container must be in good condition and not leaking. You must also transport the waste oil in a company vehicle. You should also make sure your company has the appropriate liability insurance.

## CAN I BURN WASTE OIL IN A SPACE HEATER?

You are allowed to burn your own waste oil and waste automotive oil from do-it-yourselfers in a space heater in your shop. The space heater must not have a heat capacity of more than 0.5 MMBtu/hr (500,000 Btu/hr) and must be vented to the outside. The waste oil must be managed according to the management standards on page 30.

## HOW SHOULD I MANAGE USED OIL FILTERS?

Most print shops do not generate waste oil filters. However, if you do generate waste oil filters, you are required to do the following.



**Remove oil by puncturing the filter and anti-drain back valve.**



**Hot drain or gravity drain punctured filters for a minimum of 24 hours.**



**Keep drained filters in a separate container marked *Used Oil Filters*. (If possible, locate a scrap metal recycler who can recycle your filters. Otherwise these filters can be disposed of as nonhazardous solid waste, if allowed by your landfill or solid waste hauler.)**



**Put drained oil in a separate labeled drum. See page 30. Use a waste oil transporter to dispose offsite.**

**Remember – do not discard undrained oil filters in the dumpster.**

## 4 OBSOLETE ELECTRONICS AND COMPUTERS

The printing industry responds to a demanding prepress environment with rapidly changing electronic, digital, and telecommunication equipment. In order to remain competitive in the printing market, prepress equipment – computer workstations in particular – are useful for only two to three years. Obsolete electronic and digital equipment are becoming a major “waste stream” for printers.

Many electronic and computer components contain metals. If these components are not properly managed, these metals can be released into the environment from landfills and municipal incinerators. Here are some of the metals we find in electronic and computer equipment.

**Precious metals (platinum, silver, and gold) in circuit boards and their connectors.**



**Lead from CRT (Cathode Ray Tube) glass in computer monitors.**

**Cadmium in various circuit components (usually associated with precious metals like silver).**



You have three options available to manage obsolete electronics and computers – reuse, recycling and disposal.

### REUSE

Electronic and computer equipment that is functional, but obsolete, may be suitable for reuse. Contact local schools, training institutions, or nonprofit organizations to find out the types of equipment they accept as donations. Some organizations may accept computers in need of repair. They will repair, consolidate, or reassemble the equipment for donation or sale to others.

An on-line directory of organizations that facilitate donation of used computers to schools and community groups is available at the following Web site:

[http://www.microweb.com/pepsite/Recycle/recycle\\_index.html](http://www.microweb.com/pepsite/Recycle/recycle_index.html).

Companies that donate personal computers (less than two years old) to K-12 schools may qualify for an enhanced charitable deduction starting with the 1998 tax year. Check with your accountant or tax consultant.

### **RECYCLING**

Equipment that does not work and cannot be cost-effectively repaired, or is so obsolete that it cannot be reused, can be disassembled for the scrap value. Printed circuit boards and wiring may contain recoverable quantities of precious metals, copper or aluminum. Frames and cases contain recyclable steel and plastic and when recycled or shredded for metals reclamation are not hazardous waste. (In fact, many computer manufacturers now use recycled plastic in their computer cases.) The monitors (CRTs) are made of leaded glass and can be recycled into new CRT glass or smelted for the recovery of lead.



Unfortunately, these recycling options are not always available in your area or may not be cost effective. Few electronics recycling firms have been established at this time. To start, you can check EPA’s Electronics Reuse and Recycling Directory (EPA530-B-97-001, January 1997) available at EPA’s website (see page 99 for the website address). You may also find listings in the local phone directory or on the World Wide Web. For a web search, use keywords like electronics or computers, and recycling, to find individual firms and on-line directories maintained by charity organizations and electronic/computer trade associations.

### **DISPOSAL**

Electronic and computer equipment contains metals that may exceed regulatory limits for hazardous wastes. (See page 79 for a list of metals and their limits.) Unfortunately, the burden is on you to make the determination. You have two options when you want to dispose of electronic and computer equipment.

#### **Option 1**

You can evaluate likely computer components that may contain metals and separate them out as hazardous waste – this may be an intensive and costly effort.

#### **Option 2**

You can conclude that the entire piece of equipment is hazardous waste, because hazardous components are mixed with nonhazardous components, and therefore, the whole “mixture” is regulated as hazardous.

In either case, you will then have to follow the generator requirements for the management and disposal of hazardous wastes on pages 19-28.

To avoid the hazardous waste requirements, you should make every effort to reuse or recycle obsolete electronic and computer equipment. The costs and liabilities associated with reuse and recycling computer equipment will, in the long term, be significantly less than disposal.

## 5 UNIVERSAL WASTES, BATTERIES AND LAMPS

The hazardous waste requirements ensure the proper management of wastes and minimize environmental and public health impact. Certain classes of hazardous waste, generated by a large cross section of the regulated community, may be managed through a set of environmentally protective, simplified standards known as the universal waste rule. These wastes are known as universal wastes.



Universal wastes are regulated so as to reduce the administrative burden on generators. The regulations for universal wastes also encourage the collection and recycling of these wastes to curtail their disposal as municipal wastes.

There are requirements for large and small quantity handlers (including printers) of universal wastes. While it is important to note that both large and small quantity handlers may accept universal wastes from other handlers without a permit, the destination facility where the waste is recycled, treated or disposed must have a full hazardous waste permit.

### Important Definitions

**Universal Waste** currently includes Ni-Cad and other hazardous batteries, pesticides (subject to a collection event or recall), and mercury-containing thermostats, lamps and devices.

**Battery** means a battery that exhibits one or more hazardous waste characteristics and would be regulated as hazardous, if disposed.

**Large Lead-Acid Batteries** are batteries that contain lead plates and acid solutions – similar to car batteries in size and construction.

**Pesticide** means any recalled, suspended, or unused pesticide.

**Small Quantity Handler of Universal Waste (SQHUW)** accumulates no more than 5,000 kg (11,000 lbs) of universal waste at any time.

**Large Quantity Handler of Universal Wastes (LQHUW)** accumulates more than 5,000 kg (11,000 lbs) of universal waste at any time.

**Generator** is an owner or operator of a facility that generates, accumulates, or transports universal wastes.

**Conditionally Exempt Small Quantity Generator of Hazardous Waste (CESQG)** is a generator that generates less than 220 lbs (~1/2 drum) of hazardous waste per month.

### TYPICAL UNIVERSAL WASTES

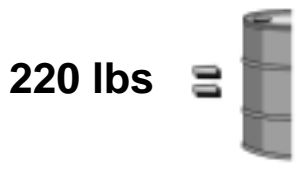
Universal waste batteries include Ni-Cad batteries and small sealed lead-acid batteries. These batteries are typically found in electronic and computer equipment, mobile phones, and emergency backup lighting. (However, the large lead-acid batteries found in Uninterrupted Power Sources (UPS) equipment that provide power to essential computer, telecommunications and production equipment may or may not be regulated as universal waste.) See page 37 for more information on how to handle large lead-acid batteries.

Pesticides subject to a collection program or manufacturer recall and mercury-containing thermostats are not typically found in the print shop. But if they are, they may be handled as universal waste.

Some fluorescent lamps also qualify as universal waste. They contain mercury and should be recycled at a mercury reclamation facility.

### UNIVERSAL WASTE EXEMPTION

The universal waste requirements do not apply to a Conditionally Exempt Small Quantity Generator (CESQG) of hazardous waste who is also a CESQG of universal waste. To be exempt from the requirements, you can not generate more than 220 lbs of hazardous waste **and** 220 lbs of universal wastes per month.

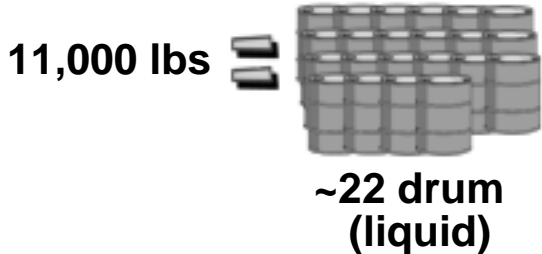


1/2 drum

If you are a CESQG, you can comply with the requirements for Small Quantity Handlers of Universal Waste at your option. (See next section.) If you elect not to follow the requirements, universal wastes (such as waste batteries and thermostats) must be disposed at a permitted hazardous waste management facility or can be discarded as nonhazardous municipal wastes in another state that allows such disposal.

### WHAT IF I AM A SMALL QUANTITY HANDLER OF UNIVERSAL WASTES?

If you do not accumulate more than 11,000 lbs of universal waste at any time during the year, you are classified as a Small Quantity Handler of Universal Waste (SQHUW). As a SQHUW, you are not required to notify DEP or EPA, or obtain an identification number. **You are required to handle the universal wastes in a way that prevents an environmental release of the waste or any of their components.**



The following requirements apply to SQHUWs:



**Accumulate the universal waste(s) in compatible containers, and segregate different wastes. For batteries, do not mix nickel-cadmium batteries with lead-acid batteries in the same container. Typically, batteries are stored in open-top plastic or steel drums. Check with your transporter on the type of container you should use.**

**Label the containers *Universal Waste - Batteries* or *Waste Batteries*. This also applies to labeling waste pesticides (also include original label) and mercury-containing thermostats or devices.**

**Mark the container with the accumulation start date.**

**Send the universal wastes offsite within one year of the accumulation start date. Maintain an inventory system to demonstrate that you do not exceed the one year time limit. Shipment records are not required to be kept on file.**

**Inform employees who handle universal wastes on the proper procedures and basic emergency response. (This can be done through classroom training or reviewing a factsheet outlining the procedures. A record that the employee received the training or factsheet should be maintained.)**

## WHAT IF I AM A LARGE QUANTITY HANDLER OF UNIVERSAL WASTES?

If you accumulate more than 11,000 lbs of universal waste at any time during the year, you are classified as a Large Quantity Handler of Universal Wastes (LQHUW). You must meet all of the requirements for SQHUWs above, plus two additional requirements. As a LQHUW, you must notify EPA and get an ID number, unless you already have a hazardous waste ID number. You must also track your waste shipments by one of the following mechanisms: a shipping log, invoices, manifests or bills of lading.

**more  
than  
11,000 lbs**



**~22 drums  
(liquid)**

## HOW DO I HANDLE SPENT FLUORESCENT AND MERCURY-VAPOR LAMPS?

All used fluorescent and mercury-vapor lamps contain mercury and some are regulated as hazardous waste. The mercury (found in the powder coating inside fluorescent lamps) or mercury vapor in certain lamps, can cause the lamps to fail the Toxicity Characteristic Leaching Procedure (TCLP) Test for hazardous wastes. See page 19 on how to determine if a waste is hazardous. Some fluorescent lamps have reduced mercury amounts and are not hazardous waste. However, most fluorescent lamps are hazardous and may be managed as universal waste or as fully regulated hazardous waste. In any case, they may not be mixed with regular trash and placed in a municipal waste dumpster.



## HOW DO I HANDLE LARGE LEAD-ACID BATTERIES?

You may have Uninterrupted Power Source equipment for critical computer, telecommunications and production equipment. These systems are typically charged with large lead-acid batteries – similar to car batteries. These batteries are regulated as universal waste or other DEP requirements.

If spent lead-acid batteries are recycled or reclaimed at a licensed facility, then you do not have to handle them as hazardous waste. The following requirements apply.

**Use a permitted facility to recycle or reclaim the batteries.**

**Ensure that the battery cases are not damaged or leaking. Once the battery case is breached, it must be handled as hazardous waste.**

**Accumulate batteries in an isolated area to prevent battery damage.**

**Maintain a file of the shipments made and the number of batteries sent to the reclamation facility.**

You should make every effort to ensure that batteries are properly stored. Leaking or damaged lead-acid batteries, or those destined for disposal, must be handled and disposed of as hazardous waste. See the hazardous waste requirements on pages 19-28.

## WHAT TYPE OF TRANSPORTERS AND RECYCLING FACILITIES SHOULD I USE FOR MY UNIVERSAL WASTES?

“Destination Facilities” are facilities that reclaim, recycle or otherwise manage universal wastes. These facilities are required to have treatment and storage permits from the DEP. You can ask to see a copy of their permit to be sure their permit status is current. If the facility is nearby, you should also visit it to evaluate their handling procedures and general appearance. As the generator, you are responsible for the proper management of your universal wastes. Although a cursory visit does not guarantee facility compliance, it could provide additional information for a good business decision.

You can self-transport these wastes directly to the receiving facility or you may also use a common carrier to transport the waste. Use of a licensed hazardous waste transporter is not required. Some destination facilities may also provide their own waste transportation.

## CAN I TRANSPORT MY OWN UNIVERSAL WASTES?

Yes, you can transport your own universal wastes to another universal waste generator, transporter, handler or destination facility. Because universal waste shipments are not tracked by manifests, they do not have to meet the requirements for hazardous waste transport. However, you are required to meet all applicable requirements for hazardous materials under the USDOT regulations. You will be required to research and comply with the applicable DOT requirements for each type of waste you ship. For batteries, you should segregate different battery types (Ni-Cad, lithium, lead-acid, alkaline, etc.), use labeled plastic or steel open top drums, an inert packing material (e.g., speedy-dry) and limit total drum weight to ~500 lbs.



The waste must be shipped in a company vehicle. The driver must have a Commercial Driver’s License. You should also investigate whether your business insurance will cover you in the event of an accident on the road. As the generator of the universal waste, you are liable for any environmental releases while en route.

## HOW DO I HANDLE AN ENVIRONMENTAL RELEASE OF UNIVERSAL WASTES?

SQHUWs and LQHUWs must immediately clean up any universal waste spills or residues. If the components released are regulated as hazardous waste, then you must follow the requirements for hazardous waste disposal. You may also be required to notify DEP, if the release exceeds any reporting thresholds. See pages 63 and 64.

Some components of universal wastes are not regulated as hazardous by themselves. If any of these components are spilled or released, and they are not contaminated with hazardous components, then you can discard them as nonhazardous residual wastes.

## 6 RESIDUAL WASTE

There are regulations that govern the handling, processing and disposal of nonhazardous industrial wastes, which are called residual wastes. Residual wastes are generally those wastes resulting from industrial operations that are not municipal or hazardous wastes.



Residual wastes may pose a potential risk to public health and the environment when improperly managed. Some residual wastes, like pallets, pose relatively little risk because they can be recycled offsite. Others, such as nonhazardous wastewater (e.g., film and plate chemistry), may pose higher risks if mismanaged by the generator or a sewage treatment plant.

DEP regulations apply to the generation, storage, transportation, processing, and disposal of residual wastes. If you generated, on average, more than 2,200 lbs of residual waste monthly in the previous year, you must comply with chemical analysis, source reduction and reporting requirements.

### IMPORTANT SIMPLIFIED DEFINITIONS \*

**Residual Waste** is an industrial waste that is not regulated as a hazardous or municipal waste.

**Product** means a commodity that is the sole intended result of a production process (e.g., printed materials sent to a customer). It does not include off-specification materials.

**Coproduct** is any material generated by the production process that is essentially equivalent to a product or virgin material that can be used again without further processing and additional environmental impact.

**By-product** is any material generated by the production process and is not a product or coproduct. (It is essentially a waste.)

**Expended Material** is a product or coproduct that has been used for a specific purpose and can no longer be used for its original purpose without further processing or treatment.

**Waste** means a by-product, unusable product or any other material generated by a production process that is abandoned or discarded. This term does not include coproducts or material reused in a manufacturing process as a raw material.

**Processing** means physical or chemical treatment that returns a used material into a usable state for reuse.

- For more complete definitions, see Section 287.1 of the Residual Waste Management Regulations.

### PRINTER RESIDUAL WASTES

The 10 most common residual wastes generated by printers are:

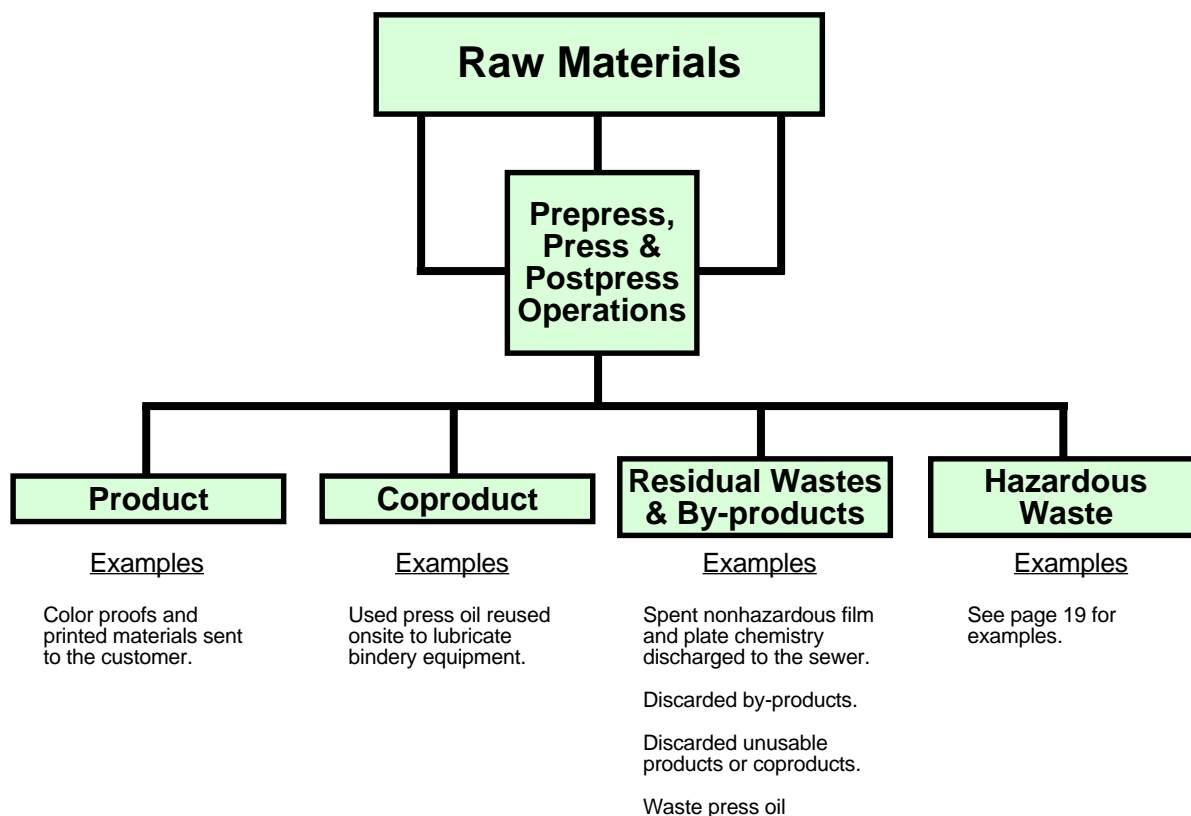
- Nonhazardous wastewater (e.g., film and plate processing chemicals) discharged to a sewer or collected for offsite disposal
- Waste oil
- Oil-contaminated debris and absorbents (pigs, oily rags)
- Nonhazardous waste inks, coatings and adhesives
- Nonhazardous waste solutions from parts cleaners
- Wood wastes (pallets, cores, etc.)
- Plastic waste (photochemistry containers)
- Nonhazardous disposable wipers
- Photographic film waste

You may also have other residual waste not listed here. To determine if the wastes are regulated, use this Rule of Thumb – if it is not a hazardous waste

(page 19), or if it is not a municipal waste (page 18), and it is discarded or recycled after processing, then it is likely a residual waste.

## HOW DO I KNOW IT'S A RESIDUAL WASTE?

You may generate materials that are not listed among the common residual printing wastes. The burden is on you to make an accurate determination to classify it as a product, coproduct, or waste (includes by-products). Use this decision tree, the definitions in 25 Pennsylvania Code 287.1 and coproduct determination in Section 287.8 to help you make the proper determination. **It is important to note that materials classified as products and coproducts are not regulated as residual waste.** Therefore, it is best to classify as many materials as possible as either products or coproducts. You should be aware that if you claim a material as a coproduct, DEP requires you to prove your claim because these materials are exempt from the waste regulations.



Using the above examples, you should make an inventory of all materials used or generated by the printing operation – prepress, press, postpress, maintenance. The inventory should identify each material as a product, coproduct, by-product, or waste. Materials reused onsite or recycled offsite may be regulated as coproducts. Waste materials sent offsite for disposal are regulated as residual wastes.

Print shops that have closed-loop recycling systems, as part of the process, do not have to count the materials as residual waste, until they are no longer usable and will be discarded. An example of a “closed-loop” system would be an automatic blanket washer using a nonhazardous solution with a built-in distillation system. The blanket wash recirculates in the press and distillation system. (Once the blanket wash is no longer usable, and is drained, then it is a residual waste.) The exemption also applies to fixer or washwater recirculating systems, and ink rebinding systems.

## DO I NEED TO SUBMIT A BIENNIAL REPORT?

If you generate more than an average of 2,200 lbs of all residual wastes in your shop per month, you are considered a Large Quantity Generator of residual waste. (Do not count universal wastes recycled offsite or hazardous wastes.) You must submit a Biennial Report (Forms 330 and 330-GM) to DEP by March 1 of every odd year (1999, 2001 etc.). Basic information about the residual wastes you generated during the previous year and how they were managed are reported. Call your DEP regional office for the Biennial Report package, if you do not receive one by February of the odd year in which the report is submitted.

Although you may not generate solid wastes in excess of 2,200 lbs per month, you should remember that industrial wastewater (film and plate chemistry, fountain solution, etc.) is regulated as a residual waste. A gallon of water weighs 8.33 lbs/gal; therefore, you need only discharge and/or ship offsite more than 250 gals/month to trigger the biennial reporting requirement.

## DO I NEED A SOURCE REDUCTION STRATEGY?

If you are a Large Quantity Generator of residual waste (see above section), then you are required to prepare a Source Reduction Strategy for all residual waste streams. **You are still required to maintain records that document the types and amounts of residual wastes generated in your shop. The records must be retained for at least five years. The records must be available during a DEP inspection.**

If you generate more than 2,200 lbs of residual waste on average per month, then you are required to prepare a Source Reduction Strategy for all waste streams. DEP has a form (Form 25R) for this purpose. Form 25R must be completed for each residual waste stream. The completed form documents your efforts to reduce the residual waste.

You can use the example matrix to help you develop a source reduction strategy.

Residual Waste	Sources	Reduction Options		On Schedule	Comments
Oily debris, disposable wipers and absorbent	Press Leaks	Revise press maintenance schedule	9/98	Yes	
	Maintenance Shop	Try reusable shop towels	7/98	Yes	
	Oil Drum Storage Room	Waterbased equipment cleaners	3/99	No	Difficulty in finding alternative products

A Source Reduction Strategy (Form 25R) for each residual waste must have the following.



**Summarize your source reduction activities conducted five years prior to the date of the current efforts. (Use the Form 25R preparation date as a reference.)**



**A statement whether you have established a formal source reduction program.**



**If you have established a formal source reduction program for the residual waste, then describe the methods and procedures to achieve a reduction in weight or toxicity of the residual waste.**



If you have **not** established a source reduction program for the residual waste, then document any past efforts and explain why potential source reduction options were not selected.



Have a corporate official sign the form.

The Source Reduction Strategy was first required on July 4, 1993, and requires updating every five years. Check the preparation dates on Form 25R to determine when you must update the strategy. You also update the Form 25R when a significant change occurs in types of residual waste generated. (The form does not need to be updated when your source reduction strategy results in a reduction in weight or toxicity of the residual waste.)

### DO I NEED TO DO CHEMICAL ANALYSES OF RESIDUAL WASTE?

You are required to conduct a chemical analysis of any individual residual waste generated in quantities greater than 2,200 lbs in any single month. A detailed characterization is required. You can use your knowledge, Material Safety Data Sheets, or other informational sources to help characterize the physical and chemical properties of the residual waste. You can use the example Waste Profile Sheet on page 81 for each residual waste. Keep the form on file for as long as you generate the waste. For individual residual waste generated in quantities less than 2,200 lbs per month, DEP only requires a hazardous waste determination at this time.

### DO I NEED APPROVAL TO DISPOSE OF MY RESIDUAL WASTE?

When you intend to dispose of residual waste at an offsite facility, such as a landfill, they will most likely require you to complete a waste survey before you can ship the residual waste. The facility may also require you to provide chemical analyses or other information about the waste before giving you approval. You can use a completed Waste Profile Sheet (page 81) for that purpose. If you are a larger generator of residual waste (greater than 2,200 lbs/month), the landfill operation is required to use DEP Form U to obtain approval to process or dispose of your residual waste offsite.

### DO I SEND THE CHEMICAL ANALYSES TO DEP?

If you generate more than 2,200 lbs of a residual waste in any single month, you are required to submit the chemical analyses **for each waste** on Form 26R to your regional DEP office. Form 26R is used to summarize the residual waste characteristics, and your management and disposal practices. The form must be submitted by March 1 of each year or on the anniversary when the disposal of the residual wastestream was first approved. If your residual waste(s) have not changed during the year, you may be able to submit a certification instead of annually performing the analyses. An updated analysis is required at least every five years. A corporate official must sign the form, and it must be notarized.



### WHAT IF I WANT TO TREAT A RESIDUAL WASTE ONSITE FOR REUSE?

As a generator of residual waste, you have an opportunity to process residual wastes, that might otherwise be discarded, for reuse in your print shop. These processing operations may qualify for a Permit-by-Rule for captive processing.

What activities are subject to these requirements? Here are some examples:



Recycling nonhazardous waste ink using a filtration/distillation unit to remove paper fines for reuse.



Recycling nonhazardous waste blanket wash through a distillation unit. It is reused, and the sludge is a hazardous or residual waste.

For example, under the Permit-by-Rule, you can burn waste paper in an industrial boiler. The boiler must have a current, enforceable DEP air quality permit and meet appropriate requirements in 25 Pennsylvania Code 287.102(b).

**To process residual waste under the Permit-by-Rule, you must notify DEP in writing that you are processing a residual waste. This can be done with a letter sent to your regional DEP office. Provide a contact person and description of your operations.** If you are unsure whether to notify, contact your DEP regional office.

If you perform onsite residual waste processing, you must meet the following requirements:



**Only process or recycle residual waste you generate. Do not accept residual waste from others.**



**Conduct a chemical analysis and Source Reduction Strategy for the residual waste you process. See page 41.**



**Properly handle and dispose of any wastes (nonhazardous, hazardous, residual) generated by the processing system.**



**Include emergency response procedures for the residual waste in your Preparedness, Prevention and Contingency (PPC) Plan. If you are not required to have a PPC Plan, then write procedures using the example Table of Contents for a PPC Plan (page 25).**



**Keep daily records on the amount or volume of residual waste processed, and any waste handling problems or emergencies.**



**Ensure that the process is conducted according to best management practices, such as: material storage in labeled containers in good condition; routine spill cleanup; and comply with equipment O&M procedures.**

# 5 WATER

DEP has regulations regarding the discharge of industrial wastewater to surface waters (streams, ponds, rivers, etc.), groundwater (i.e. septic systems), and into a municipal sewer system. This section outlines the requirements for each receiving system.

Your shop may generate industrial wastewater from several sources including: film and plate processing; spent fountain solution; equipment washing; and waterbased inks, coatings, adhesives and cleaning solutions. The discharge of the industrial wastewater represents a significant environmental issue.



## 1 SEPTIC SYSTEMS

You cannot discharge any liquid industrial waste to a septic system. You can only discharge sanitary wastewater to an onsite septic system. You are required to ship offsite your photoprocessing wastewater, waste fountain solution, process cleaning solutions, and any other waste streams from prepress, press and postpress operations. If the industrial wastewater is not regulated as hazardous (page 19), you may be able to use a septage hauler that collects septage/wastewater for disposal at a sewer treatment plant. If you cannot find a septage hauler, you can ship offsite any nonhazardous industrial wastewater to an approval treatment/disposal facility.

## 2 DISCHARGES TO MUNICIPAL SEWERS

You may discharge industrial wastewater to a municipal sewer system after receiving approval from the local sewer authority (or sewage treatment plant). DEP regulates the discharges of wastewater treatment plants to local surface waters (e.g. streams, rivers, etc.). In turn, the sewer authorities or treatment plants require, through local sewer ordinances, industrial wastewater dischargers to comply with certain discharge limits and sewer use permits. These ordinances are also called “pretreatment requirements for indirect dischargers.” (Indirect means the wastewater goes through a sewer system to a treatment plant and does not go directly to a river.)

You are required to determine what local pretreatment requirements are applicable to your shop’s operations. Contact the local sewer authority or sewer treatment plant for information on discharge limits and permit requirements. A list of sewer authorities is provided on page 83.

### WHAT ARE TYPICAL DISCHARGE LIMITS?

Regardless of municipality or regional treatment plant, there are usually basic general prohibitions on the types of wastewater that cannot be discharged to the sewer. The prohibitions that may affect printers include:



**DO NOT** discharge combustibles/flammables (flash point less than 140°F) down the drain.



**DO NOT** discharge malodorous (e.g., rotten egg smell, etc.) wastewater.



**DO NOT** discharge any wastewater containing solids (e.g., paper, etc.) that may obstruct the flow in sewers.

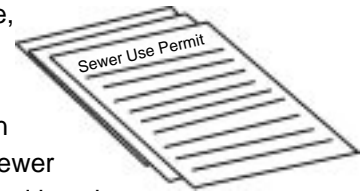


**DO NOT** discharge wastewater with a pH of less than 5.5 or higher than 10.0. (This pH range will vary according to sewage treatment plant requirements.)

There may also be other discharge limits for organic and metal pollutants. The limits most likely to be of concern to a printer are: BOD<sub>5</sub>, COD, Total Suspended Solids, oil & grease, phenol, silver, copper, and zinc. You should contact your local sewer authority or treatment plant to find out what local limits apply to your wastewater discharge.

## HOW DO I GET A SEWER USE PERMIT?

Your local sewer authority or treatment plant will provide you with a Wastewater Survey or Permit Application form to summarize (by source, volume, and characteristic) your wastewater before it is discharged to the sewer. You may also be required to sample and analyze your wastewater, and submit the results with the form. (Note that the location and collection method of the wastewater varies according to the local sewer authority or treatment plant. You should inquire on the proper method and location before you sample.)



After you complete and submit the form, the local sewer authority will decide the need for a sewer use permit. For most printers, permits are generally not required. Larger printers, with large volumes of wastewater discharges or discharges of unique pollutants, usually need permits. If a permit is required, you should read the permit carefully to ensure you understand your obligations. The permit may also require you to sample your wastewater (monthly, quarterly, semiannually or annually) and submit reports. If so, set up a calendar to be sure that you perform the monitoring and prepare the reports on time.

If you do not need a sewer use permit, you are still required to comply with the general prohibitions, and any discharge limits in the local sewer ordinance. Your local sewer authority may still require you to complete an annual Wastewater Survey.

## ANNUAL WASTEWATER SURVEY

Your local sewer authority or treatment plant may require you to complete a Wastewater Survey each year. Review the form carefully and reevaluate the volume and characteristics of the wastewater you discharge to ensure proper reporting. Some sewer authorities may also require annual wastewater analyses. Generally, small printers do not have to perform wastewater analyses, and the local sewer authority will accept instead, an estimate of the type and concentration of pollutants in the wastewater discharge.

## 3 DISCHARGES TO SURFACE WATERS

DEP and EPA regulate the discharge of wastewater to rivers, streams, or lakes. You must obtain a wastewater discharge permit (also called a National Pollutant Discharge Elimination System or NPDES permit), regardless of the wastewater volume or characteristics. In addition, the discharged wastewater

will have to meet specific effluent requirements, and you will be subject to wastewater monitoring and reporting requirements.



If you have no other option for wastewater disposal, and intend to discharge to surface waters, you must submit an NPDES application to DEP to obtain a permit at least 180 days before discharging any wastewater. The application and approval process is thorough and resource intensive. You may want to seek a consultant with expertise in these types of permits.

You should seriously consider all options before discharging to surface waters. For more information, call your DEP regional office.

## 4 STORMWATER

Many industrial activities create sediments and harmful levels of certain toxics and chemicals. These substances collect on facility premises and can be discharged to surface waters of the Commonwealth during rainfall events through ditches, swales, streams or storm sewers. DEP regulates stormwater discharges from industrial activities, including printers with an SIC code 27XX, through the permit process. For printers, an NPDES permit is required for stormwater discharges from all outside areas where material handling equipment or activities, raw materials, intermediate products, final products, waste material, byproducts, or industrial machinery are present. If a condition of no-exposure exists – that is these operations or materials are protected by a storm resistant shelter and not exposed to rain, snow, snowmelt, and/or runoff – then you are exempt from a permit. All printers with a primary SIC code 27XX are required to do one of two things: 1) obtain an NPDES permit; or 2) assure that a no-exposure condition exists and submit a no-exposure certification to DEP. Call DEP to obtain the permit application or no-exposure form.



Source	Stormwater Discharge Permit
Outside storage of chemicals and empty containers	Yes
Uncovered aboveground storage tanks	Yes
Uncovered ink fill pipes	Yes
Outside fuel dispensing operations	Yes
Onsite fleet vehicle maintenance shops	Yes
Contaminated or oil soaked pallets	Yes
Open compactors or dumpsters (no lids or overhang roofs)	Yes
Compressor and cooling system blowdown	Yes
Uncovered loading dock platforms	Yes
Sprinkler system flushing	No
Uncontaminated air conditioning condensate	No
Lawn sprinklers	No

There are three options, if you have outside activities and discharge stormwater to surface waters.

- Option 1** Relocate materials and/or activities inside and submit a no-exposure certification.
- Option 2** Build shelters around or roofs over materials and/or activities conducted outside and submit a no-exposure certification.
- Option 3** Continue your activities and obtain a stormwater discharge permit. (Stormwater NPDES General Permit (PAG-3) or individual permit)

## WHAT TYPE OF PERMIT DO I NEED?

There are three types of stormwater discharge permits.



An individual permit for a specific facility.



A general permit (PAG-3).



A no-exposure certification in lieu of a permit.

General permits are preferred, because they may not require any stormwater testing, while individual permits do require testing. All printers with outside activities and discharging stormwater are required to have at least a general permit.

To obtain a general permit, you must submit a Notice of Intent (NOI). If you seek to obtain an individual permit, you must submit an individual application. The NOI and individual permit application form can be obtained from your nearest regional DEP office.



Discharging stormwater (exposed to outside activities) to municipal system requires a municipal approval. A municipal permit may be required. You should call your local sewer authority for more information.

## IF I GET A GENERAL PERMIT, THEN WHAT DO I DO?

Printers with a general stormwater permit must prepare and implement a Stormwater Preparedness, Prevention and Control (PPC) Plan. A Table of Contents for a typical PPC Plan is on page 48. In preparing this Plan, you should design it to minimize future revisions. Put equipment lists, phone numbers, and site plans, etc. on separate pages for easy updating. You should review the plan at least annually to make sure it is current, when equipment/procedures change or if you implement the plan and any of the procedures are inadequate.

The PPC Plan is intended to help printers identify activities and industrial areas which contribute to stormwater contamination and where BMPs (Best Management Practices) need to be established. For the printing industry, the use of BMPs provides several benefits in place of traditional engineering controls to prevent contamination of stormwater discharges. The table on page 48 gives a description of stormwater BMPs for printing operations.

BMPs also allow printers to avoid analytical monitoring of the stormwater discharges. Only printers that use Section 313 or Form R chemicals (page 60) are required to perform monitoring of stormwater.

The general permit requires a visual inspection that includes observations and documentation of color, odor, turbidity, floating solids, foam, and oil sheen at stormwater discharge points. The inspection procedures should be outlined in the PPC Plan. It is recommended that a logbook be used to document the inspections.

**PPC PLAN - TABLE OF CONTENTS**

- Section 1 - Purpose of Plan
- Section 2 - Preparedness, Prevention & Control Team Responsibilities
- Section 3 - Description of Pollutant Sources
- Section 4 - Preventive Measures & Controls, Spill Response
- Section 5 - List of Spills for the Last 5 Years
- Section 6 - Annual Site Inspection/Evaluation
- Section 7 - Nonstormwater Discharges
- Section 8 - Plan Review and Update
- Appendices
  - Site Plans Showing Outfalls and Sources
  - Site Inspection Form(s)
  - Stormwater Analyses (if required)

**Stormwater – Best Management Practices for Printers**

<b>Plates &amp; Film</b>	Store inside on pallets or drums before pickups.
<b>Pallets</b>	Do not accumulate. Reuse or discard immediately. Store inside, if possible.
<b>Storage Tanks</b>	Locate ink, fuel oil and solvent tanks inside, if possible. Ensure that fill pipes are covered with drip trays. If located outside, use double-wall tanks or cover with roofs.
<b>Empty Drums &amp; Containers</b>	Do not store on loading dock platforms. Store inside.
<b>Dumpsters &amp; Compactors</b>	Use lids or cover with shelters.
<b>Loading and Unloading Chemicals</b>	Do not unload or load during rainstorms. Do not store containers on loading docks.
<b>Outside Spills</b>	Clean up spills immediately.
<b>Vehicle Fueling Operations</b>	Cover dispensers and installed grooved pavement.
<b>Fleet Vehicle Washing</b>	If possible, use biodegradable washes or only pressurized water. Do not wash fleet vehicles (10 or more vehicles) outside. Use an offsite service.
<b>Fleet Maintenance</b>	Perform fleet maintenance activities inside. Do not store parts outside. Install storm drains inside garage connecting to an oil-water separator.

# 6 STORAGE TANKS

Storage tanks provide a convenient and economical method of storing materials frequently used in your shop. They also can pose a serious threat to the environment if they leak or fail. Cleanup of tank leaks can also expose your company to costly liabilities.

## IMPORTANT DEFINITIONS

**Hazardous substance** is a substance on the EPA CERCLA List, but excludes hazardous waste and petroleum. Substances on the list used by lithographic printers include: formaldehyde, hydroquinone, silver, sulfuric acid, perchloroethylene, etc. Refer to page 58 for additional substances and information.

**Highly Hazardous Substance** is a substance on the EPA CERCLA List with a release reporting quantity of 10 lbs or less. Lithographic printers typically do not use substances that are characterized as high hazardous.

**Aboveground Storage Tank (AST)** is a stationary tank with a capacity of more than 250 gallons containing petroleum products or hazardous substances. (This excludes an AST of 1,100 gallon capacity or less containing motor fuel for noncommercial use onsite (not for retail sale) and any AST for heating oil, propane or kerosene used.) Over 90% of the total tank and pipe volume must be above grade, and be able to be visually inspected.

**Underground Storage Tank (UST)** is a tank with a capacity of more than 110 gallons containing petroleum products or hazardous substances. Ten percent or more of the total volume of the tank and pipes is underground and cannot be visually inspected.

**AST Facility** has one or more ASTs.

**A Large AST Facility** has one or more ASTs with a total capacity greater than 21,000 gallons.

**Secondary Containment** is an additional impervious layer designed to detect leaks before they are released to the environment.

**Emergency Containment** is a containment structure that can contain a release from an AST/UST until it can be expeditiously emptied or recovered.

There are DEP regulations that govern the safe construction, operation and maintenance of Aboveground Storage Tanks (ASTs) and Underground Storage Tanks (USTs). Storage tanks for hazardous, residual and municipal wastes are regulated by the waste management regulations. Follow the best management practices for storage tanks, as outlined in this section. Refer to Section 4 for specific regulations.

The DEP regulations depend on three factors – the size of the tank, the material stored, and the total capacity of tanks at your shop.

## 1 REGISTRATION

You are required to register an AST or UST with DEP and pay an annual registration fee. The registration forms are available from the regional DEP offices or at DEP's website.

ASTs and USTs containing petroleum inks, fuels (gasoline, fuel oil, etc.) or solvents must be registered, if they exceed the capacity thresholds. (See Important Definitions.) Soy inks containing no petroleum are exempt. If you are unsure whether an AST/UST is exempt, contact your regional DEP office.

To register an AST/UST, you must complete and send the registration form to DEP. The department will

send you a temporary registration in the form of a letter with an invoice. Once the invoice is paid, DEP will issue a registration certificate that must be posted near the UST/AST. You will receive an annual invoice to maintain registration. The annual AST registration fees range from \$50 to \$300 depending upon tank capacity. The annual UST registration fee is \$50.

## 2 DO I NEED A PERMIT FOR MY ASTs AND USTs?

There are two types of permits for tanks. There are Site Specific Installation Permits (SSIP) and Operating Permits. Operating permits are either a Permit-by-Rule (PBR) Permit or a General Operating Permit. The most common type of permit for printers will be the PBR Permit as described below. General Operating Permits are for ASTs greater than 21,000 gallons, highly hazardous substance tanks, hazardous substance USTs and field-constructed USTs. (For more guidance, see the [DEP Rule Summary No. 257-2318-004](#) entitled, "Summary of the Permitting of Underground and Aboveground Storage Tank Systems and Facilities, Chapter 245, Subchapter C".)

## 3 HOW DO I GET AN SSIP?

You must obtain an SSIP for any new tanks or tank facilities that meet the criteria below. An application form can be obtained from the DEP Central office or at DEP's website. The SSIP applies to:



New ASTs with a capacity of more than 21,000 gallons.



New large AST facilities with a total capacity of more than 21,000 gallons.



Any ASTs/USTs with highly hazardous substances.



Field constructed USTs.

**NOTE:** The last two tank types typically do not apply to print shops.

You will also be required to provide detailed maps and tank plans, conduct an environmental assessment and provide a notice for public comment.

DEP will not issue an SSIP if the tanks are located in a wetland or 100-year flood plain. There is one exception – new AST and AST facilities can be located in the floodplain, if the proposed site was in industrial use before August 5, 1989.



## 4 PERMIT BY RULE




If you have small ASTs (not exceeding 21,000 gallons each) that do not store highly hazardous substances or manufactured (prefabricated) USTs storing petroleum products, you do not need to submit a permit application to DEP. These USTs are covered under a Permit-by-Rule. However, you must do the following:



**Register your ASTs and USTs with DEP.**



**Ensure that all tank installations, removals, modifications and inspections are done by individuals certified by the DEP. Keep copies of the certification and other supporting documents for your records.**












-  **Meet applicable AST and UST requirements. See below this page and page 53 for more information.**
-  **Meet the financial responsibility requirements for USTs ( page 55).**
-  **Follow spill response and release notification requirements. See page 62 for more information.**

## **5** AST REQUIREMENTS

There are different requirements for small ASTs, large ASTs and large AST facilities. The following sections describe the requirements for each type.

### **SMALL ASTs**

The following technical requirements apply to small ASTs with 21,000 gallons or less capacity.

-  **Ensure security to protect the environment and public.**
-  **Conduct tightness test on any new or substantially modified tank before use.** *(Substantial modification means repairs or construction that alters the physical construction or integrity of the tank.)*
-  **Comply with industry standards and manufacturer specifications for tanks, piping and ancillary equipment.**
-  **Use DEP-certified installer for all tank construction and inspection activities.**
-  **Provide stable supports or foundation for tanks, as needed.**
-  **Protect the tank exterior against corrosion with paint or coating.**
-  **Label the tanks with their contents.** *(OSHA requires all tanks and containers to be labeled with the product name, primary hazards and target organs.)*
-  **For all tanks installed after October 11, 1997, installed secondary containment to allow leak detection and emergency containment to retain spills or leaks for 72 hours. Tanks installed before October 11, 1997, have three years to install emergency containment and 10 years to install secondary containment.**
-  **Conduct monthly leak detection by automatic sensing device, a mechanical device, or visual examination.** *(It is recommended that you keep copies of the inspection results in a logbook.)*
-  **Properly close tanks retired from service. Request DEP Rule Summary No. 257-0900-019 for more information.**
-  **Keep records on tank installation, modification and design specifications, tank permits, registration certificate, monthly leak detection and any third-party inspection reports.**

## SMALL AST IN-SERVICE INSPECTIONS

ASTs must be inspected by a DEP-certified inspector. (Tanks with 5,000 gallon or less capacity are exempt from the inspection requirements, except for highly hazardous substance tanks.) These inspections are called In-Service Inspections. Any deficiencies noted by the inspection must be corrected. The initial In-Service Inspection must be conducted as follows:

AST installed after 10/11/97		within 10 years of installation
AST installed between 10/11/87 & 10/10/97		within 10 years of installation or by 10/11/03, whichever is later
AST installed before 10/11/87		by 10/11/02

The Follow-up In-Service Inspection must be conducted every 10 years for small ASTs having greater than 5,000 gallons capacity, but no more than 21,000 gallons.

## LARGE ASTs

If you own large ASTs having a capacity of more than 21,000 gallons, there are additional requirements. These requirements are highlighted here. For more information, see the [DEP Rule Summary No. 257-0900-018](#) entitled, "Summary of the Technical Requirements for Aboveground Storage Tanks, Chapter 245, Subchapter F."



**Prepare a written operations and maintenance plan for each tank.**



**Prepare a Spill Prevention Response Plan (SPR Plan).** *(This applies only to large AST facilities with over 21,000 gallon total capacity.)*



**Conduct visual inspections every 72 hours, and monthly operator maintenance inspections.**



**Keep additional temporary records on the last two cathodic protection monitoring results (if applicable), site assessments and closure report.** *(The latter two records are kept for three years instead of one year for other temporary records.)*



**Keep permanent records on tank designs, manufacturer specifications, permits, third-party inspection reports (in-service and out-of-service), and reportable releases.**








**Use DEP-certified installer to perform all tank construction and inspection activities.**



**Tightness test tanks before use and after reconstruction/relocation.**



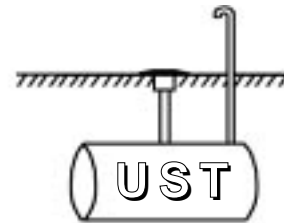
**Modify tanks according to manufacturer specifications or professional engineer designs.**

-  Provide adequate vent mechanisms and operating valves.
-  Provide corrosion and deterioration protection through the use of coatings, paints, and cathodic protection for tank bottoms or piping in contact with the ground.
-  Provide overfill prevention with gauge or monitoring device to show tank level and a high-level alarm.
-  Provide automatic or manual leak detection with monthly checks.
-  Conduct more detailed In-Service Inspections, Out-of-Service Inspections, and Installation/Modification Inspections.

**IMPORTANT**  
 You should refer to DEP Rule Summary No. 257-0900-018 entitled, "Summary of the Technical Requirements for Aboveground Storage Tanks", for more details on tank modifications, enclosures for tanks, vents, corrosion protection, overfill prevention, leak detection, and inspections.

## 6 UST REQUIREMENTS

USTs must meet technical requirements for leak detection, corrosion protection and overfill/spill prevention, as well as inspection requirements. These requirements are highlighted here. See the [DEP Rule Summary No. 257-0900-020](#) entitled, "**Summary of the Technical Standards for Underground Storage Tanks**, Chapter 245, Subchapter E." For further guidance, call your regional DEP office.




All existing and new USTs must be inspected for leak detection and release prevention methods. The initial inspection must be completed by:


- |   |   |                                  |
|---|---|----------------------------------|
| Installed before 12/22/89               |  | by 10/11/99                      |
| Installed between 12/23/89 and 10/11/97 |  | by 10/11/02                      |
| Installed after 10/11/97                |  | within 12 months of installation |


A follow-up inspection must be conducted at least every five years, if the UST and piping is single-walled, or there is no other secondary containment. Inspection is required every 10 years if there is secondary containment (e.g., double-walled tank or pipes, etc.) on both the tank and piping.


## PERFORMANCE STANDARDS FOR NEW USTs


If you have USTs installed after December 22, 1988, they are regulated as new USTs. Here is a summary of the new UST performance standards.


- 

**USTs must be made of material protected from corrosion, such as: fiberglass-reinforced plastic (FRP); steel-FRP composite; steel coated with dielectric material; or it has factory/field-installed cathodic protection.** *(Cathodic protection systems must be inspected within six months of installation and every three years thereafter.)*
- 

**UST piping must be constructed of FRP or other non-corrodible material. Steel can be used if it is protected by a cathodic protection system.**
- 

**UST must have a catch basin to retain any product that may be released when a transfer hose is detached from the fill pipe.** *(Typically, this basin has a capacity of 2 gallons or more. Catch basins are not required when transfers of less than 25 gallons always occur, such as for waste oil tanks.)*
- 

**UST must have overfill prevention such as: an automatic shutoff at 95 percent tank capacity; flow restrictor at 90 percent tank capacity or 30 minutes before full tank; or high-level alarm at 90 percent tank capacity or one minute before full tank. (Same 25 gallon exemption apply as above.)**
- 

**UST must have a leak detection system such as: automatic tank gauging; vapor monitoring; or interstitial monitoring. Manual tank gauging can still be used for petroleum USTs of 1,000 gallons or less. Inventory control may be used for 10 years after tank installation.**
- 

**USTs must be installed, modified and removed by a DEP-certified installer.**

## PERFORMANCE STANDARDS FOR EXISTING USTs

If you have USTs installed before December 22, 1988, they are regulated as existing USTs. All existing USTs must meet new UST performance standards by December 22, 1998.

**If you did not upgrade your existing USTs to new tank status, they must be closed immediately.**

Existing USTs



Close   Upgrade  
By  
December 22, 1998

## RECORDS AND REPORTS

You are required to keep certain records on file, and submit notifications to DEP. You must keep records on all tank repairs and upgrades, release detection methods (including monitor printouts, performance claims, sampling, testing, calibration and repairs, etc.), and cathodic protection systems

(e.g., including inspections, monitoring, and voltage and amperage readings). All records must be kept in a central location or with the UST and available for inspection by DEP.

You are required to notify DEP on their “Registration/Permitting of Storage Tanks Form” if you install a new UST. If you change the tank’s service (e.g. store a different substance in the tank) or permanently close the tank, you must again notify DEP. All tank handling activities must be performed by a certified tank installer.

## UST FINANCIAL RESPONSIBILITY

If you own a UST, you are financially responsible for spills, releases, and certain third-party damages. There are six mechanisms available to demonstrate financial responsibility: self-insurance, commercial insurance, standby trust fund, letter of credit, surety bond or state fund.



The Underground Storage Tank Indemnification Fund (USTIF) was established to provide coverage for the major portion of a tank owner’s responsibility. The tank owner must still have funds available to cover USTIF deductibles in the event of a release. The fund is administered by the Pennsylvania Department of Insurance (717-787-0763). For additional information, call for DEP’s Storage Tanks Program Fact Sheet No. 16.

## UST CLOSURE & CHANGE IN SERVICE

If you temporarily close (for less than 12 months), permanently close or change the service (e.g., store a different material in an existing tank) of a UST, you are required to follow specific procedures. See [DEP Rule Summary No. 257-0900-020](#) entitled, “Summary of Standards for Underground Storage Tanks, Chapter 245, Subchapter E.” For further guidance, call your regional DEP office.

## 7 RELEASE REPORTING

Spills and releases from ASTs and USTs have to be reported to DEP within 24 hours after the confirmation of a reportable release. See page 62 for more detailed information.

# 7 RISK MANAGEMENT PLANS

The Clean Air Act of 1990 required EPA to focus on the prevention of chemical accidents. New regulations require companies that produce, handle, process, distribute or store certain chemicals above specified thresholds to identify the hazards and assess the risks of potential chemical accidents, known as Risk Management Planning. Risk Management Planning integrates local government emergency preparedness and response, pollution prevention, and worker safety by anticipating and developing preventive measures for potential chemical accidents – small or large.



## 1 WHO'S COVERED

Risk Management Planning is required for printers that use a threshold quantity of a listed substance in a single process. Currently, there are over 100 listed substances with established threshold quantities of 500 to 20,000 lbs. For listed flammables, the threshold quantity is 10,000 lbs.

For printers, bulk storage of propane and flammable (flash point less than 100°F) solvents could

**IMPORTANT DEFINITIONS**

**Risk Management Planning (RMP)** is a formal effort to anticipate chemical accidents, evaluate their risks, and develop preventive measures.

**Process** means manufacturing, storing, distributing, handling, or using a listed substance.

**Threshold Quantity** is a quantity of a listed substance in a single process at any time during the year. Above this quantity, Risk Management Planning is required.

**Listed Flammable** means one of 66 flammable substances subject to the Risk Management Planning.

trigger the RMP requirements. If you store more than 1,500 gallons of a typical flammable petroleum solvent (density of 6.7 lbs/gal), you would exceed the 10,000 lbs threshold quantity. Bulk storage of propane liquefied gas, (LPG) in excess of 2,300 gallons will also trigger the RMP requirements.

If you store in bulk quantities and use flammable substances, you need to determine if the material is listed. If so, you must determine if you exceed the 10,000 lbs threshold. When determining the quantity of flammable substance stored and used, you only

quantify the substance itself and not the whole mixture, unless it is 100 percent.

Typical offset lithographic inks (heatset or nonheatset) do not contain listed substances and gasoline for motor vehicles is exempt. Therefore, bulk storage and use of printing inks and gasoline are not subject to the RMP requirements.

## THREE LEVELS OF COMPLIANCE

Regulated processes are classified into three categories – or Programs – according to the chemicals used and whether the public would be affected in a worst-case chemical accident.

**Program 1**

For low-risk substances that, under a worst-case scenario (e.g., spill, fire, explosions, etc.), would not affect the public. Remotely located sources and processes using listed flammables are primarily eligible for this program.

**Program 2**

For moderate risk substances and processes where the public would be affected (e.g., propane users with storage tanks near residential areas).

**Program 3**

For high risk substances –generally not found in the printing industry where the public would be affected. (If you are subject to OSHA’s Process Safety Management standards, you are in this program.)

**PROGRAM 1**

Because of the limited potential for serious offsite consequences, Program 1 requirements only require a hazard assessment and the compilation of a 5-year history of accidental releases. The assessment evaluates the specific potential release scenarios, including worst-case. If the hazard assessment concludes no public risk, then you are required to prepare a Risk Management Plan that summarizes the above efforts. If public exposure is possible, then you must meet Program 2 or 3 requirements.



**PROGRAMS 2 AND 3**

In addition to the Program 1 requirements, you are required to implement a risk prevention program, an emergency response program, and an overall management program. Then a Risk Management Plan summarizing all of the above must be prepared.



**REPORTING REQUIREMENTS**

To document compliance with the rule and provide risk information you will be required to register with the EPA and provide the 5-year accident history, hazard assessment and Risk Management Plan. You must comply with the requirements and report to EPA by June 20, 1999. Contact your regional EPA office for more guidance.

**HELP FOR SMALL BUSINESSES**

Assistance on RMP requirements can be obtained from the Federal Small Business Assistance Program (see the Yellow Pages for local listings), the Emergency Planning and Community Right-to-Know Hotline at (800) 424-9346, or your nearest regional DEP office.

# 8 COMMUNITY RIGHT-TO-KNOW






The federal Superfund Amendments Reauthorization Act (SARA) of 1986, created a program with two goals: to facilitate and promote planning for chemical emergencies at the state and local levels; and to provide information to the public about the chemicals used, stored, and released in their communities. To implement these two goals, EPA promulgated regulations requiring companies, including printers, to gather certain information for community emergency planning efforts, and established a network of emergency planning entities at the local, state, and federal level.



The SARA emergency planning provisions are designed to promote the discovery and mitigation of risks associated with chemical use and accidental release. To reduce risks, EPA and DEP encourage prevention, preparedness, and quick response to chemical emergencies. If properly executed, these three measures can make the difference in averting disaster. Prevention involves proper safety measures, sound management practices, and preventive maintenance – preparedness anticipates an accident that occurs despite prevention measures. Emergency preparedness plans help companies and local and state governments respond to accidents quickly. These plans outline the procedures a company and the community should follow in quickly responding to a release.

## 1 REPORTING AND RECORDKEEPING REQUIREMENTS

Printers under SARA are subject to DEP, the Pennsylvania Emergency Management Council (PEMC), the Department of Labor & Industry (L&I) and EPA reporting requirements for hazardous chemicals. There are five types of reporting and recordkeeping requirements:

-  Initial PEMC notification for the storage, handling and use of hazardous chemicals (SARA Title III, Section 302).
-  The annual hazardous chemical inventory report, also known as the Tier Two Report (SARA Title III, Sections 311 and 312) submitted to L&I.
-  The annual Toxics Release Inventory Report, also known as Form R (SARA Title III, Section 313).
-  The Pennsylvania Hazardous Substance Survey Form.
-  Emergency release notification of DEP, PEMC and EPA.

If you store and/or use film and plate chemistry, inks, solvents, fuels (propane, fuel oil, gasoline, etc.) in large quantities, you may be subject to one or more of the above requirements. **All printers are subject to the DEP, PEMC and EPA emergency release notification requirements.**

## 2 AM I REQUIRED TO NOTIFY AND REPORT?

To determine if you are required to notify DEP, PEMC and EPA about hazardous chemicals in your shop, you need to know two things. First, only certain hazardous chemicals are subject to

notification and reporting requirements. Second, you must **store** these chemicals above certain Threshold Planning Quantities (TPQs) at any time during the calendar year.

There are hundreds of listed hazardous chemicals with TPQs. (The list is also Appendix A in the EPA regulations in 40 CFR Part 355). Many of the listed hazardous chemicals are not used in lithographic printing. Below is a summary of chemicals commonly found in print shops. For any chemical required to have a MSDS by OSHA, there is also a general TPQ of 10,000 lbs.

<u>CAS Number</u>	<u>Chemical</u>	<u>TPQ (lbs)</u>	<u>Typical Source</u>
50-00-0	Formaldehyde	500	Photochemicals
123-31-91	Hydroquinone	500	Photochemicals
7664-93-9	Sulfuric Acid	500	Batteries
N/A	Any Chemical	10,000	Inks and fuels

To determine if chemicals stored in your shop exceed the TPQ, you can quantify the chemical in one of two ways. You can quantify only the chemical according to its concentration in the mixture, or you can report the whole mixture. Although it may take more time to calculate, you should opt for the former method, only quantifying the chemical in the mixture. (If you are significantly below the TPQs, you can document this in a file memo and only reevaluate when chemical usage significantly changes.) For smaller printers, generally inks and fuels stored in bulk quantity trigger the notification and reporting requirements. Refer to the translator table below to help you make the determination.

<u>Chemical</u>	<u>Typical Concentration/Weight</u>	<u>Volume to Exceed TPQ *</u>
Formaldehyde	10% wt/vol	5,000 gal (total mixture)
Hydroquinone	15% wt/vol	3,300 gal (total mixture)
Sulfuric Acid	50% (~12 lbs/gal)	80 gal in batteries
Lithographic Inks	~8.5 lbs/gal	1,150 gal (drums or tanks)
Gasoline	~7.0 lbs/gal	1,400 gal
Propane	~4.3 lbs/gal	2,300 gal
No. 2 Fuel Oil	~8.7 lbs/gal	1,150 gal

**\* Note – If your quantity estimates are close to the translator volumes, you may want to make a more accurate determination. Remember – Only notify for chemicals stored in excess of the TPQ at any time during the calendar year.**

### **3 How Do I NOTIFY?**

You submit a copy of the MSDS for each reportable chemical or a list of the hazardous chemicals grouped by hazard category (combustibles, acids, caustics, etc.) to the PEMC and the Local Emergency Planning Committee (LEPC) in your county. This list must include the hazardous chemical name or common name and any hazardous component of each chemical, except when reporting by mixture. The MSDS or list of chemicals is a one time submission. There is sample notification letter



and a list of LEPCs in the “SARA Title III and Pennsylvania Act 165 - Facility Compliance Manual” available from PEMC. See page 97 for contact information.

If, after initial notification, you find a hazardous chemical that is newly covered, or there has been new information on a previously reported chemical, the information reported must be updated. Submit any new MSDSs or a revised list of chemicals to the PEMC and LEPC.

## 4 TIER TWO REPORTS

The Tier Two Report is an **annual inventory form** for reporting your chemicals in excess of their Threshold Planning Quantities or TPQs. The TPQs are 10,000 lbs for any chemical with an MSDS or 500 lbs of a specifically listed chemical (e.g., sulfuric acid, etc.), whichever is less. It must be sent to L&I, the LEPC and the local fire department by March 1 of each year. You complete the form for the previous calendar year. An example form is provided on pages 93 and 94. You can obtain the Tier Two Report form directly from L&I.



Even if your chemicals and quantities do not change from year to year, you still have to submit the annual Tier Two Report by March 1. You can copy the previous year’s information to the new form and send it to L&I, the LEPC and the local fire department.

### WHAT HAPPENS IF I START USING A NEW CHEMICAL?

During the year, you may have started using a chemical or mixture that is now reportable or exceeds a TPQ. Include the chemical/mixture on your next Tier Two Report and attach the chemical’s MSDS (or revised MSDS list). This will comply with the renotification requirements described in Section 4.

## 5 RELEASE REPORTING – FORM R

Form R is a special inventory form due July 1 each year for chemicals used in the previous calendar year. This form is only required if you used more than 10,000 lbs, or processed (incorporated into product) more than 25,000 lbs of specifically listed chemicals. These chemicals are not necessarily the same chemicals reported on the Tier Two Reports. Here is a summary of Form R chemicals typically found in lithographic printing. **If you are a large printer, you may need to review the entire list to be sure you comply with the reporting requirements. Remember – these chemicals must be used (not necessarily stored) in excess of 10,000 lbs or processed in excess of 25,000 lbs during a calendar year.**

<u>CAS Number</u>	<u>Chemical</u>
7440-39-3	Barium
7440-47-3	Chromium
7440-50-8	Copper
107-21-1	Ethylene Glycol
123-31-9	Hydroquinone
67-56-1	Methanol
108-10-1	Methyl Ethyl ketone
75-09-2	Methylene Chloride
127-18-4	Perchloroethylene

Chemicals typically found in lithographic printing (continued).

<u>CAS Number</u>	<u>Chemical</u>
108-88-3	Toluene
108-38-3	m-Xylene
95-47-6	o-Xylene
106-42-3	p-Xylenes
N/A	Xylene Mixture
N/A	Certain Glycol Ethers

#### **IMPORTANT**

**Copper phthalocyanine pigments are not reportable for Form R. Reportable glycol ethers are based on the formula provided in the EPA chemical list.**

Preparing a Form R is time consuming and labor intensive. The completed Form R must be sent to EPA and L&I. You may need a consultant with experience in completing the form to help you. The forms and a list of reportable chemicals can be obtained from EPA's Emergency Planning and Community Right-to-Know Hotline at (800) 424-9346, or PEMC. Additional information on Form R requirements can be found in PEMC's *Facility Compliance Manual*. See additional resources on page 97.

## **6 PENNSYLVANIA HAZARDOUS SUBSTANCE SURVEY**

Printers are also required to prepare a report on hazardous substances used in their shops. L&I has a list of over 2,300 hazardous substances. If you use, handle or store any of the hazardous substances on the list, regardless of quantity, you must complete a Hazardous Substance Survey Form (HSSF).

**This report is in addition to the Tier Two Report and Form R.**

The report must be completed each year by April 1 and covers the previous calendar year. A completed report must be posted in your shop and does not have to be sent to the DEP or L&I, unless requested. It must be available during a DEP or L&I inspection. A sample Hazardous Substance Survey Form is found on pages 95 and 96. You can obtain a Hazardous Substance Survey package from the L&I office (717) 783-2071 or use your own form, if it contains the same information.

### **WHAT IS THE ENVIRONMENTAL HAZARD SURVEY FORM?**

The Environmental Hazard Survey Form (EHSF) is a document that provides information about those hazardous substances on the L&I's Hazardous Substance List. These substances are designated as "Environmental Hazards" when emitted, discharged or discarded. You are only required to complete this form when L&I requests you to do so in writing and also provides the form.

# 9 RELEASE REPORTING

DEP will respond to spills, accidents and other releases of hazardous chemicals by any action it deems necessary. There are many Pennsylvania laws (e.g., The Air Pollution Control Act, The Solid Waste Management Act, The Pennsylvania Storage Tank Act, The Clean Streams Law, The Pennsylvania Hazardous Materials Emergency Planning and Response Act of 1990, etc.) that require printers, DEP and PEMC to respond to an emergency and minimize potential environmental and public health impacts. DEP also has, as part of its environmental protection mission, the responsibility to ensure that the environment is restored and public safety is maintained after an emergency.



Here are the major state laws for notifying DEP of an environment release.



**The Pennsylvania Clean Streams Law** requires that any spill into surface water (wetlands, lakes, streams, rivers, sewers, drains and ditches) and groundwater be reported to DEP. All spills to these receiving systems are reportable.



**The Solid Waste Act** requires the reporting of all releases of hazardous waste to surface water or groundwater. If there is no effect on water, then the report of a hazardous waste spill is based on Reportable Quantities.



**The Pennsylvania Storage Tank Act** requires all releases from USTs and ASTs to be reported to DEP.



**The Pennsylvania Hazardous Materials Emergency Planning and Response Act of 1990.**

The reporting requirements under these state laws are in addition to reporting requirements under other federal laws and regulations, such as The Clean Water Act, SARA Title III and USDOT HAZMAT regulations.

## 1 WHO'S RESPONSIBLE FOR REPORTING A RELEASE?









It is the company's responsibility to notify DEP of a reportable release to the environment. Local emergency response agencies or contractors do not have any responsibility to report a release. Under state and federal law, you are responsible for the cleanup of any materials released to the environment.

There are significant penalties for not reporting a release when required. **If the spill amount is close to the reportable quantity, you should make the conservative assumption and report the release, as soon as possible.**







## 2 WHEN DO I REPORT A SPILL?

You may have to notify the nearest DEP regional office, PEMC, EPA (through the National Response Center 1-800-424-8802), the LEPC (see page 59) and the local sewer authority. Because of the numerous state and federal laws and regulations on agency notification, the following common scenarios are provided to assist you in making a determination on when to report. Material means an individual chemical, a mixture, or a waste (hazardous or residual). Refer to “Facility Compliance Manual” available from PEMC for a more detailed review of state reporting requirements. See additional resources on page 97.

<u>Spill Incident</u>	<u>Who to Notify</u>
Materials spilled inside building, no release to the environment.	 No reporting necessary.
Materials spilled inside building, but enters floor drains to septic system.	 Report all spills in this category to DEP.
Materials spilled inside building, but enters floor drains to sewer system.	 Report all spills in this category to DEP and local sewer authority.
Less than five gallons of material spilled on loading dock platform. No contact with soil or drains.	 No reporting necessary.
More than five gallons spilled outside building onto impervious surface. No contact with soil or drains.	 Can elect to report all spills in this incident type or check reportable quantities (see next page) to determine the necessity to report.
Material spilled into surface water, groundwater, wetlands, swale or storm sewer.	 Report to DEP and NRC all spills in this category. If above reportable quantities, also PEMC and LEPC.
Spill more than 100 lbs (in some cases 10 lbs) of hazardous waste.	 Report to DEP, NRC, PEMC and LEPC.
Material released to the air.	 If you have an air quality permit for that material, then call DEP office noted on permit. <b>OR</b>  If you do not have a permit for that material, call DEP, NRC, PEMC and LEPC, if in excess of reportable quantities. <b>OR</b>  If subject to Risk Management Planning, call DEP and NRC.

Spill Incident

Who to Notify

- Leak from registered UST.  Report all leaks in this category to DEP Storage Tank Program.
- Leak from registered AST inside building, no release to the environment.  No reporting necessary.
- Leak from registered AST to the environment.  Notify DEP, PEMC and LEPC, if it exceeds the reportable quantity for material.
- Leak from register-exempt AST/UST. See page 49.  Notify DEP, PEMC and LEPC, if it exceeds the reportable quantity for material.

### WHAT ARE THE REPORTABLE QUANTITIES?

There are hundreds of chemicals and hazardous wastes with Reportable Quantity (RQ) thresholds. Here is a list of common chemicals/wastes that are used by printers with RQs.

<u>Chemical</u>	<u>RQ (lbs)</u>	<u>Hazardous Wastes</u>	<u>RQ (lbs)</u>
Acetone	5,000	Ignitable (D001)	100
Ammonia	100	Corrosive (D002)	100
Copper	5,000	TCLP - Barium (D005)	1,000
Diethanolamine	100	TCLP - Chromium (D007)	10
Formaldehyde	100	TCLP - Lead (D008)	10
Hydroquinone	100	TCLP - Silver (D011)	1
Methyl Ethyl Ketone	5,000		
Methylene Chloride	1,000	<u>Petroleum</u>	
Perchloroethylene	100	Gasoline	
Phenol	1,000	Propane (LPG, etc.)	
Sulfuric Acid	1,000	Fuel and Diesel Oil	
Trichloroethylene	100	Kerosene	
Toluene	1,000	(call DEP on releases to soil and water)	
Xylene (m & o isomers)	1,000		
Xylene (p isomer)	100		
		<u>Residual Waste</u>	
		(use individual chemical RQs)	

If you have a release of other chemicals, you should consult the tables: 40 CFR 117.3 for reportable chemicals under The Clean Water Act; and 40 CFR 302.4 and 355, Appendix A for reportable chemicals under the Community Right-to-Know SARA Title III. **Again, when in doubt, you should make the conservative assumption and report the release to the DEP and PEMC.**

### 3 HOW SOON SHOULD I REPORT?

You are required to report a release **immediately after** its discovery. You can report the release by telephone to DEP, NRC, LEPC and the local sewer authority, as applicable.

## 4 WHAT INFORMATION SHOULD I REPORT?

You must provide DEP, NRC, PEMC or LEPC with the following information, if known at the time of reporting.



Company name, address & telephone number.



Contact person and telephone number.



Chemical name or identity of material released into the environment.



An estimate of the quantity of material released.



The time (and duration, if known) of the release.



Impact of release (surface water, groundwater, soil, etc.)



Any known or anticipated health risks.



Need for emergency medical assistance.



Assessment on whether public evacuation is required.

## 5 ARE FOLLOWUP REPORTS REQUIRED?

Yes. You are required to submit in writing what actions were taken to respond to and contain the release, any known health risks, and whether emergency medical assistance was given. The report can be in the form of a letter and must be submitted within 14 days of the original telephone notification. DEP, EPA, PEMC or LEPC may require additional information. When you notify an agency by phone you should ask what followup efforts you must take, including written reports.

## 6 WHAT OTHER AGENCIES NEED TO BE NOTIFIED?

There are other reporting requirements to OSHA and the USDOT. For OSHA, you must call the nearest area office when a fatality occurs in the workplace or when three or more employees are hospitalized. OSHA must be notified **within eight hours** of discovery.

Notification of the USDOT is required when an accident involving hazardous materials or wastes results in: a fatality or hospitalization; more than \$50,000 in property damage; public evacuation; or the closing of one or more major roads for more than one hour.

For both OSHA and USDOT notifications, followup reports are required.



# The Ink Rooms

## Additional Resources and Materials

### **The Cyan Ink Room - Pollution Prevention**

Examples of Cost/Benefit Methods for Pollution Prevention

### **The Magenta Ink Room - Air Quality**

Examples of Common Permitting Scenarios  
Flow Diagrams for Obtaining Operating Permits  
VOC and HAP Calculation Methods  
VOC/HAP Data Sheet  
List of Hazardous Air Pollutants  
Translator Threshold Table

### **The Yellow Ink Room**

What is a Hazardous Waste?  
List of F-Solvents, D-Wastes and U-Wastes  
Typical Hazardous Waste Profile Sheet  
Hazardous Waste Accumulation Area Sign

### **The Black Ink Room**

List of Local Sewer Authorities  
Information You Need for a Typical Wastewater Survey

### **The Green Ink Room**

Sample Tier Two Report and Instructions  
Sample Pennsylvania Hazardous Substance Form

### **The Orange Ink Room**

PADEP Regional Offices and Additional Resources

Here are four examples of cost/benefit methods to help determine the cost of compliance or a particular P2 technique. These methods, as well as others, can be tailored to your needs and can be applied to other situations.

**Method 1 - Cost/Benefit of Silver Recovery Systems**

Cost to purchase and install silver recovery equipment: \$ \_\_\_\_\_  
 Annual cost to service and maintain equipment: \$ \_\_\_\_\_  
 Monthly volume of fixer: \_\_\_\_\_ x 12 = annual volume: \_\_\_\_\_ gallons  
 Cost of fixer per gallon: \$ \_\_\_\_\_  
 Value of recovered silver: \$ \_\_\_\_\_ (estimate on basis of removal efficiency x annual volume of fix used x average price paid for silver)  
 Total annual cost: \$ \_\_\_\_\_  
 Annual cost of fix + 1/5 of equipment cost (assuming amortized over 5 yrs.) + annual maintenance cost - annual value of recovered silver: \$ \_\_\_\_\_

**Method 2 - Photochemical Waste Removal/Recycling (for any hazardous waste)**

Monthly volume of fixer: \_\_\_\_\_ x 12 = annual volume: \_\_\_\_\_ gallons  
 Cost per gallon of fixer: \$ \_\_\_\_\_  
 Cost per gallon to ship as hazardous waste or recyclable material: \$ \_\_\_\_\_  
 Total annual cost (total material cost + annual disposal cost): \$ \_\_\_\_\_

**Method 3 - Chemical Substitution Evaluation Method**

Current product: \_\_\_\_\_  
 Annual gallons and cost: \_\_\_\_\_ gallons \$ \_\_\_\_\_  
 VOC content: \_\_\_\_\_ lbs/gal  
 Annual gallons X VOC content = \_\_\_\_\_ lbs VOC/year  
 Product vapor pressure in mm (Hg): \_\_\_\_\_

Substitute product: \_\_\_\_\_  
 Annual gallons and cost: \_\_\_\_\_ gallons \$ \_\_\_\_\_  
 VOC content: \_\_\_\_\_ lbs/gal  
 Annual gallons X VOC content = \_\_\_\_\_ lbs VOC/year  
 Product vapor pressure in mm (Hg): \_\_\_\_\_

Questions:  
 How well does the substitute work? \_\_\_\_\_  
 Is it easier to use? \_\_\_\_\_  
 Does it require a change in work practices? \_\_\_\_\_  
 Does it require retraining of employees? \_\_\_\_\_  
 Is there an annual cost savings? Yes \_\_\_ No \_\_\_ If so, how much? \$ \_\_\_\_\_  
 Is the vapor pressure below 10 mm Hg (for press cleaning solvents only)? Yes \_\_\_ No \_\_\_  
 Is there a reduction in VOCs? Yes \_\_\_ No \_\_\_ If so, what is it? \_\_\_\_\_ lbs/year

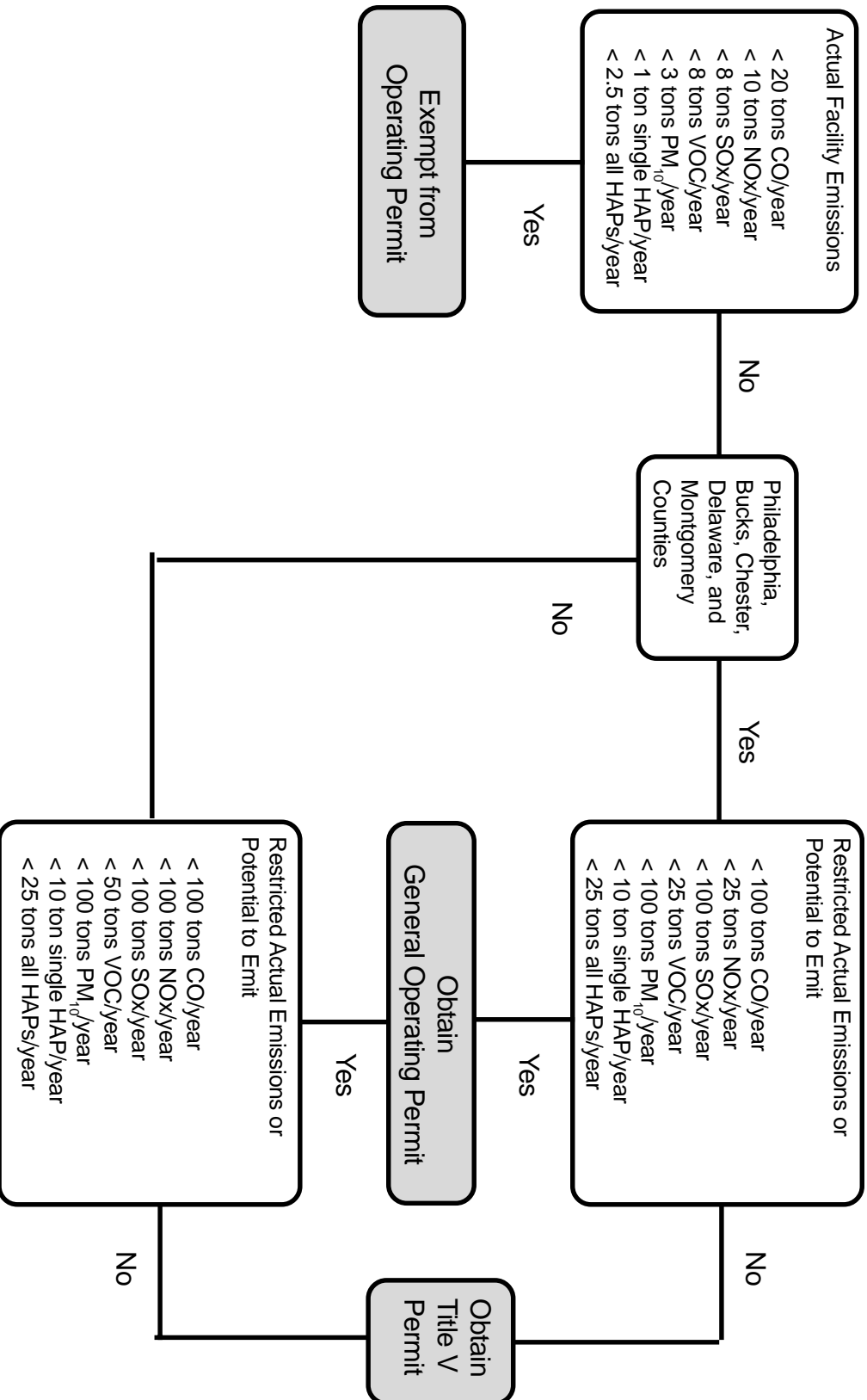
Recommendation:  
 Should we use the substitute product? Yes \_\_\_ No \_\_\_

**Method 4 - Simple Payback Analysis for Fixer Recirculation System**  
*(can be used for other equipment)*

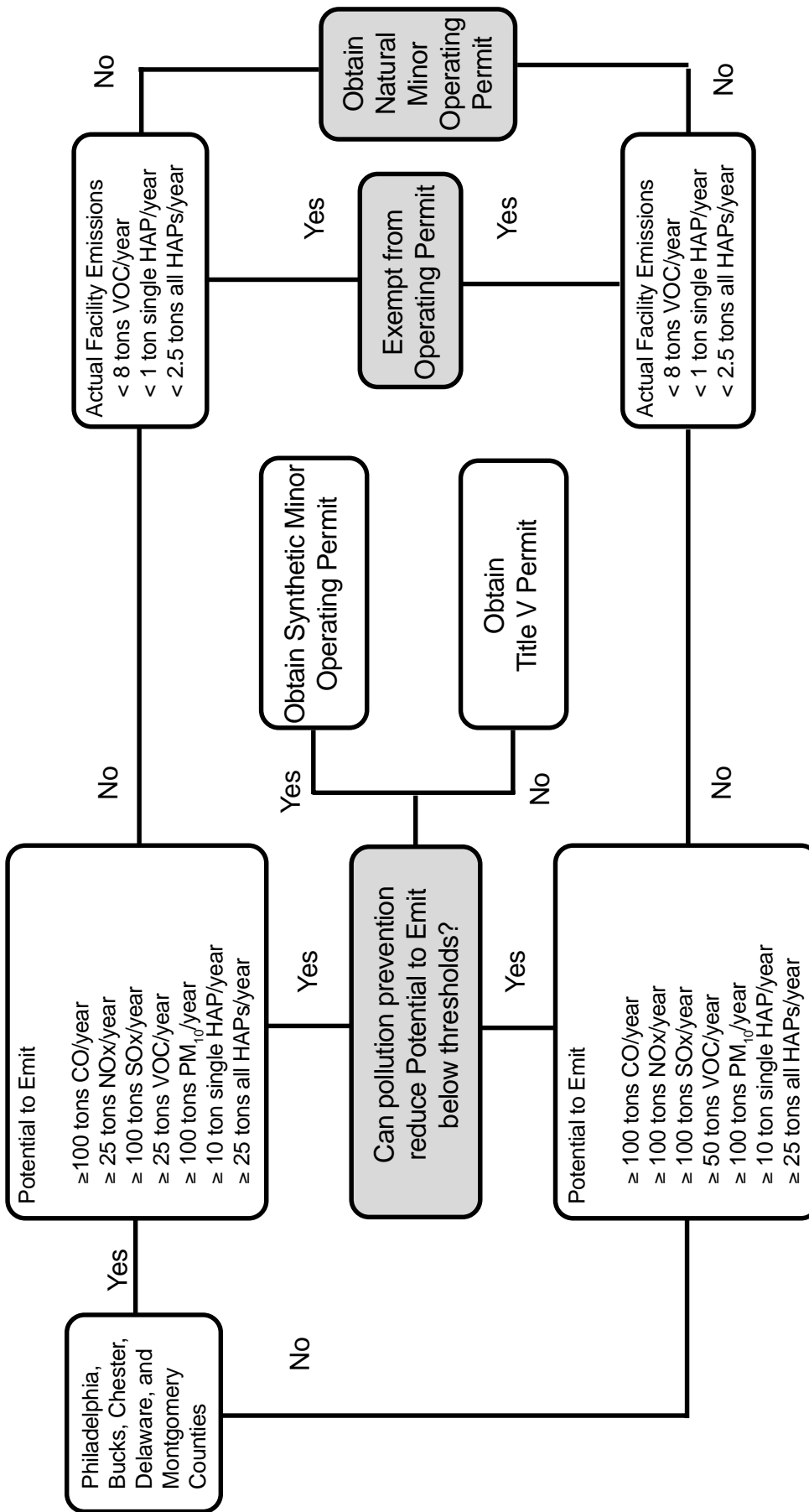
Monthly volume of fixer: \_\_\_\_\_ x 12 = annual volume: \_\_\_\_\_ gallons  
Cost per gallon of fixer: \$ \_\_\_\_\_  
Cost per gallon to ship as hazardous waste or recyclable material: \$ \_\_\_\_\_  
Total annual waste disposal cost (annual volume x cost per gallon): \$ \_\_\_\_\_  
Volume and cost of water for the last two years  
199\_\_ : \$ \_\_\_\_\_ 199\_\_ : \$ \_\_\_\_\_  
Average annual volume and cost of water: \_\_\_\_\_ gallons \$ \_\_\_\_\_  
Estimated annual savings in water use with recirculation system: \_\_\_\_\_ gallons \$ \_\_\_\_\_  
Estimated annual savings in fixer purchases: \_\_\_\_\_ gallons \$ \_\_\_\_\_  
Cost of recirculating system installed: \$ \_\_\_\_\_ System annual service and maintenance cost: \$ \_\_\_\_\_  
Number of years before savings achieved: \_\_\_\_\_  
Cost of recirculating system \$ \_\_\_\_\_  
(annual disposal \$ \_\_\_\_\_ + saved fixer \$ \_\_\_\_\_ + saved water \$ \_\_\_\_\_ - maintenance \$ \_\_\_\_\_)

Go to page 97 for agencies, associations, and services available to the printer, including technical assistance and pollution prevention resources.

## Flow Diagram to Determine When a General Operating Permit is Required for a Nonheatset Sheetfed Lithographic Printer



## Flow Diagram to Determine When an Operating Permit is Required for Printers Other Than Nonheatset Sheetfed Lithographic Printers



EXAMPLES OF COMMON PERMITTING SCENARIOS

Example 1

You are planning to build a new lithographic printing facility in either Lancaster, PA or Chester, PA. The presses are the only sources of emissions. Based on your expected level of business, you estimate the following actual and potential emissions:

<u>Pollutant</u>	<u>Actual Emissions (tons/year)</u>	<u>Potential to Emit (tons/year)</u>
VOCs	3.0	12.5
Combined HAPs	1.6	6.5
Single HAP	0.75 each	3.0 each

If you built the facility in Lancaster, all of the emission levels are below all of the thresholds for plan approval or operating permit. Therefore, you could proceed with building the facility without applying for any plan approvals or permits. You must still give a 15-day notice to DEP (page 11) that you are exempt from the plan approvals.

If you built the facility in Chester, you would need to obtain a plan approval, but not an operating permit.

Example 2

You operate an existing sheetfed offset lithographic printing facility in Bucks County. Your current levels of actual and potential emissions are below those for a plan approval and an operating permit. You want to add two new presses. The Actual Emissions from all presses (existing and new) will be 9 tons VOCs/year with a Potential to Emit of 20 tons VOC/year. You must get a plan approval for the new presses and an operating permit for the facility. You can use the general plan approval and permit application for sheetfed offset lithographic presses.

ESTIMATING EMISSIONS FROM LITHOGRAPHIC PRINTING OPERATIONS

To determine which regulations apply to your business, you must first estimate the pounds and tons of VOCs, HAPs, and NOx that are being released from all of the sources, including prepress, presses, cleaning, bindery equipment, boilers and storage tanks. You need to calculate both the **actual** emissions and **potential to emit** for all of the sources at your facility.

VOC-containing Materials

To calculate **actual** VOC emissions from all materials that contain VOCs, you should do the following:

- Review your purchasing and inventory records to find out how much of each ink, fountain solution, additive, cleaning solution, coating, adhesive and other VOC-containing materials you used during the previous year. If last year was a slow year, use consumption information that reflects a busy year or six months of this year, which could be doubled.
- Review Section II the Material Safety Data Sheets (MSDS) for each compound to find out how much VOCs and HAPs (if any) they contain and the density in pounds per gallon (lbs/gal) of each material. If the density is not listed on the MSDS, you can calculate it by multiplying the specific gravity (which is

always on the MSDS) by 8.33 lbs/gal (the density of water).

- Calculate emissions. Worksheets are provided on pages 74-75.

To estimate **potential** emissions from VOC-containing materials, you should do the following:

- Figure out the amounts of materials that would be used if the presses ran at their maximum capacity or rate. If you do not know the information, contact the vendor or manufacturer.
- Using the MSDS, find out which materials have the most VOCs.
- Calculate the emissions for 1 hour assuming that the presses operate at the maximum capacity using the materials with the most VOCs.
- Multiply the hourly emission rate by 8,760 hours per year.

If the MSDS do not have any of the information you need to calculate emissions, or for some reason you believe the MSDS may not be correct, call the manufacturers of the products for information.

### Other Sources

For other sources such as storage tanks or boilers, the EPA provides methods for calculating actual and potential emissions. To use these methods, you must review your purchasing and inventory records to determine how much liquid was stored in the tank or how much natural gas, propane or heating oil was consumed. The time period should coincide with the other material consumption information. If you have these types of sources, call your regional DEP office.

### VOC and HAP Data Sheet

Properties of the Products as Supplied by the Manufacturer			
<i>Property Manufacturer</i> _____			
<i>Property Identification</i> _____			
<i>Product density</i> _____	<i>lb/gal ASTM D1475-60</i>	<i>VOC content</i> _____	<i>lb/gal.</i>
<i>Total volatiles</i> _____	<i>Weight % ASTM</i>	<i>Flash Point</i> _____	<i>ASTM D93</i>
<i>Water content</i> _____	<i>Weight % ASTM D 4017</i>	<i>HAP Content</i> _____	<i>Method 311</i>
<i>Organic volatiles</i> _____	<i>Weight %</i>		
<b>Hazardous Air Pollutants:</b>			
<b>Name</b>	<b>Weight %</b>		
_____	_____		
_____	_____		
_____	_____		
_____	_____		
<i>Remarks:</i>			

### Fountain Solution VOC Addition Form

(See also worksheet for fountain solution VOCs in Sheefed General Permit)

Indicate When Any VOC is Added To Press Ready Fountain Solution				
Press	VOC in Concentrate (ounces)	VOC in Additive (ounces)	VOC Added (ounces)	Final VOC Content in Weight Percent
<i>Final Press Ready VOC Concentration:</i>				
Step 1	Weight of VOC in Concentrate = $\frac{\text{Oz Concen.} \times \text{VOC Content (lbs/gal)}}{128 \text{ oz/gal}}$			
Step 2	Weight of VOC in Additive = $\frac{\text{Oz. Additive} \times \text{VOC Content (lbs/gal)}}{128 \text{ oz/gal}}$			
Step 3	Weight of VOC Added = $\frac{\text{Oz Added VOC} \times \text{VOC Content (lbs/gal)}}{128 \text{ oz/gal}}$			
Weight Percent VOC = $\frac{\text{Result of Steps 1+2+3}}{\text{Result of 1+2+3} + 8.33 \text{ lbs/gal water}}$				

## How to Calculate Your VOCs and HAPs

### Conversion chart of pounds/gallons/tons

1 gallon	=	6-8 pounds (depends on product's specific gravity)
275 gallons	=	5 drums x 55 gallons (about 1 ton)
3,000 gallons	=	approx. 10 tons (depending on specific gravity)
2,000 pounds	=	1 ton

### STEP 1: Gather your Material Safety Data Sheets (MSDS) for:

- Blanket wash/roller wash/press wash/type wash
- Parts cleaner (solvent)
- Inks, coatings and adhesives
- Alcohol or alcohol substitutes (including fountain solution concentrate)
- Proofing system solutions (if alcohol or solvent based)

### STEP 2: Complete the following for each product: (Section 2 or 3 of the MSDS for VOC/HAP content)

- Product name \_\_\_\_\_ Mfr/vendor \_\_\_\_\_
- Monthly Use \_\_\_\_\_ gallons (gals) or pounds (lbs)
- VOC/HAP Content \_\_\_\_\_

#### If VOC/HAP content of product is given in weight % VOC/HAP, then:

$(\text{Weight \% VOC (or HAP)} \div 100) \times \text{lbs product /month} \times 0.05 = \text{lbs total VOCs or HAPs/month}$

*\* Ink retention factor for nonheatset offset lithographic inks only.*

#### If VOC/HAP content is given in lbs VOC/HAP per gal of product, convert as follows and use result in the above formulas:

*For calculating VOCs (or HAPs) in inks:*

$(\text{lbs total VOC (or HAPs)/gal product} \div \text{lbs/gal product}) \div 100 = \text{weight \% VOC (or HAPs)}$

*For press cleaning materials (sold by the gallon):*

$\text{lbs total VOC (or HAPs)/gal product} \times \text{gals product/month} = \text{lbs total VOCs (or HAPs)/month}$

#### If VOC/HAP content is given in volume % VOC/HAP, contact your supplier or manufacturer to obtain weight % VOC/HAP.

### STEP 3: Calculate Your Annual VOC/HAP Emissions:

#### Take monthly use of each product in lbs VOC (or HAP)/month & multiply by 12.

*(If you have actual product use records for the last 12 months, you can use those values to calculate your annual emissions.)*

#### Add the annual VOC/HAP emissions of each product and divide by 2,000 to obtain tons VOC (or HAP)/year.

(Typical HAPs used by printers are highlighted in bold.)

CAS No.	Chemical	CAS No.	Chemical
75070	Acetaldehyde	111444	Dichloroethyl ether
60355	Acetamide	542758	1,3-Dichloropropene
75058	Acetonitrile	62737	Dichlorvos
98862	Acetophenone	<b>111422</b>	<b>Diethanolamine</b>
53963	Acetylaminofluorene	121697	N,N Dimethylaniline
107028	Acrolein	64675	Diethyl sulfate
79061	Acrylamide	119904	3,3'-Dimethoxybenzidine
79107	Acrylic acid	60117	Dimethylaminoazobenzene
107131	Acrylonitrile	119937	3,3'-Dimethyl benzidine
107051	Allyl chloride (3-chloropropene)	79447	Dimethyl carbamoyl chloride
92671	4-Aminobiphenyl	68122	N,N-Dimethylformamide
62533	Aniline	57147	1,1-Dimethylhydrazine
90040	o-Anisidine	131113	Dimethyl phthalate
1332214	Asbestos	77781	Dimethyl sulfate
71432	Benzene	534521	4,6-Dinitro-o-cresol and salts
92875	Benzidine	51285	2,4-Dinitrophenol
98077	Benzotrithloride	121142	2,4-Dinitrotoluene
100447	Benzyl chloride	123911	1,4-Dioxane
92524	Biphenyl	122667	1,2-Diphenylhydrazine
117817	Bis(2-ethylhexyl) phthalate (DEHP)	106898	Epichlorohydrin
542881	Bis(chloromethyl)ether	106887	1,2-Epoxybutane
75252	Bromoform	140885	Ethyl acrylate
106990	1,3-Butadiene	<b>100414</b>	<b>Ethylbenzene</b>
156627	Calcium cyanamide	51796	Ethyl carbamate (urethane)
133062	Captan	75003	Ethyl chloride
63252	Carbayl	106934	Ethylene dibromide
75150	Carbon disulfide	107062	Ethylene dichloride (1,2-dichloroethane)
56235	Carbon tetrachloride	<b>107211</b>	<b>Ethylene glycol</b>
463581	Carbonyl sulfide	151564	Ethylene imine (aziridine)
120809	Catechol	75218	Ethylene oxide
133904	Chloramben	96457	Ethylenethiourea
57749	Chlordane	75343	Ethylidene dichloride (1,1-dichloroethane)
7782505	Chlorine	<b>50000</b>	<b>Formaldehyde</b>
79118	Chloroacetic acid	76448	Heptachlor
532274	2-Chloroacetophenone	118741	Hexachlorobenzene
108907	Chlorobenzene	87683	Hexachlorobutadiene
510156	Chlorobenzilate	77474	Hexachlorocyclopentadiene
67663	Chloroform	67721	Hexachloroethane
107302	Chloromethyl methyl ether	822060	Hexamethylene-1,6-diisocyanate
126998	Chloroprene	680319	Hexamethylphosphoramide
1319773	Cresols	<b>110543</b>	<b>n-Hexane</b>
95487	o-Cresol	302012	Hydrazine
108394	m-Cresol	<b>7647010</b>	<b>Hydrochloric acid</b>
106445	p-Cresol	7664393	Hydrofluoric acid
<b>98828</b>	<b>Cumene</b>	<b>123319</b>	<b>Hydroquinone</b>
94757	2,4-D, salts and esters	<b>78591</b>	<b>Isophorone</b>
3547044	DDE	58899	Lindane
334883	Diazomethane	108316	Maleic anhydride
132649	Dibenzofurans	<b>67561</b>	<b>Methanol</b>
96128	1,2-Dibromo-3-chloropropane (DBCP)	72435	Methoxychlor
<b>84742</b>	<b>Di-n-butyl phthalate</b>	74839	Methyl bromide (bromomethane)
106467	1,4-Dichlorobenzene (p)	74873	Methyl chloride (chloromethane)
91941	3,3'-Dichlorobenzidine	<b>71556</b>	<b>Methyl chloroform (1,1,1-trichloroethane)</b>

CAS No.	Chemical	CAS No.	Chemical
<b>78933</b>	<b>Methyl ethyl ketone (MEK)</b>	<b>108883</b>	<b>Toluene</b>
60344	Methylhydrazine	95807	2,4-Toluene diamine
74884	Methyl iodide	<b>584849</b>	<b>2,4-Toluene diisocyanate</b>
<b>108101</b>	<b>Methyl isobutyl ketone (MIBK)</b>	95534	o-Toluidine
624839	Methyl isocyanate	8001352	Toxaphene (chlorinated camphenes)
<b>80626</b>	<b>Methylmethacrylate</b>	120821	Trichlorobenzene
1634044	Methyl tert-butyl ether	<b>79005</b>	<b>1,1,2-Trichloroethane</b>
101144	4,4'-Methylene bis(2-chloroaniline)	<b>79016</b>	<b>Trichloroethylene (TCE)</b>
<b>75092</b>	<b>Methylene chloride</b>	95954	2,4,5-Trichlorophenol
101688	Methylene diphenyl diisocyanate (MDI)	88062	2,4,6-Trichlorophenol
101779	4,4'-Methylenedianiline	121448	Triethylamine
<b>91203</b>	<b>Naphthalene</b>	1582098	Trifuralin
98953	Nitrobenzene	540841	2,2,4-Trimethylpentane
92933	4-Nitrobiphenyl	<b>108054</b>	<b>Vinyl acetate</b>
100027	4-Nitrophenol	593602	Vinyl bromide
79469	2-Nitropropane	<b>75014</b>	<b>Vinyl chloride</b>
684935	N-Nitroso-N-methylurea	75354	Vinylidene chloride (1,1-dichloroethylene)
62759	N-Nitrosodimethylamine	<b>1330207</b>	<b>Xylene (all isomers and mixture)</b>
59892	N-Nitrosomorpholine	<b>95476</b>	<b>o-Xylene</b>
56382	Parathion	<b>108383</b>	<b>m-Xylene</b>
82688	Pentachlorobenzene	<b>106423</b>	<b>p-Xylene</b>
87865	Pentachlorophenol		
108952	Phenol		
106503	p-Phenylenediamine		
75445	Phosgene		
7803512	Phosphine		
7723140	Phosphorus		
85449	Phthalic anhydride		
1336363	Polychlorinated biphenyls (PCBs)		
1120714	1,3-Propane sultone		
57578	beta-Propiolactone		
123386	Propionaldehyde		
114261	Propoxur (Baygon)		
78875	Propylene dichloride		
<b>75569</b>	<b>Propylene oxide</b>		
75558	1,2-Propylenimine		
91225	Quinoline		
106514	Quinone		
100425	Styrene		
96093	Styrene oxide		
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin		
9345	1,1,2,2-Tetrachloroethane		
<b>127184</b>	<b>Tetrachloroethene (perchloroethylene)</b>		
7550450	Titanium tetrachloride		

**HAP Compounds**

7440360	Antimony compounds
7440382	Arsenic compounds
7440417	Beryllium compounds
<b>7440439</b>	<b>Cadmium compounds (not emitted)</b>
<b>7440473</b>	<b>Chromium compounds</b>
<b>7440484</b>	<b>Cobalt compounds (not emitted)</b>
65996818	Coke oven emissions
57125	Cyanide compounds
<b>I-311</b>	<b>Glycol ethers*</b>
<b>7439921</b>	<b>Lead compounds (not emitted)</b>
<b>7439965</b>	<b>Manganese compounds (not emitted)</b>
7439976	Mercury compounds
E-196	Fine mineral fibers
7440020	Nickel compounds
E-033	Polycyclic organic matter
Q-006	Radionuclides (including radon)
<b>7782492</b>	<b>Selenium compounds (not emitted)</b>

\* Mono and di-ethers of ethylene and diethylene glycols, except diethylene glycol, propylene glycol ethers, propylene glycol methyl ether acetate, propylene glycol methyl ether, and dipropylene monomethyl ether.

**HAPs Translator Threshold Table**

To estimate whether you may exceed the 10 tons HAP/year individual threshold, use the following gallon conversion factors for each HAP (assumes 100% HAP). If your HAP usage is close to the gallons equivalency value, do the actual emissions calculation for more accurate results.

HAP (lbs/gal)	Gallons Equivalency	HAP (lbs/gal)	Gallons Equivalency
6.7	2,980	9.0	2,220
7.0	2,850	9.5	2,100
7.5	2,660	10.0	2,000
8.0	2,500	11.0	1,810

## WHAT IS A HAZARDOUS WASTE?

A printer may generate wastes that, if improperly disposed, can adversely affect public health and the environment. These wastes are considered **hazardous** and are currently regulated by both federal and state public health and environmental safety laws.

This fact sheet tells you how to determine if a waste is regulated as hazardous. It is important to recognize that some states have differing definitions of hazardous wastes, which include more wastes than the federal EPA regulations. However, all states must, as a minimum, include all of the wastes defined as hazardous under the federal regulations.

The first and most important step is to determine if a spent material is a waste. Essentially, a waste is any solid, liquid, or contained gaseous material that is no longer used, and is either recycled, thrown away, or stored until sufficient quantities are accumulated for treatment or disposal.

After the material is determined to be a waste, it must be evaluated relative to its ingredients and physical characteristics. A waste is classified as a hazardous waste in one of two ways:

- 1) It exhibits any of the characteristics specified by EPA regulations; **or**
- 2) It is specifically listed as a hazardous waste in EPA regulations.

### **Characteristic Wastes**

A waste is regulated as hazardous if it exhibits one or more characteristics. The characteristics are ignitability, corrosivity, reactivity, or toxic. Most hazardous wastes generated by printers are ignitable. Some may be corrosive or toxic. Refer to Table 1 on the next page for these characteristic wastes and their EPA waste codes.

### **Listed Wastes**

A waste is also regulated as hazardous if it appears on any one of the four hazardous waste lists (known as the F-listed wastes, P-listed wastes, K-listed wastes, or U-listed wastes). Wastes identified on these four lists are classified as hazardous because they contain toxic constituents shown to be harmful to public health and/or the environment. There are over 400 listed hazardous wastes.

Printers may also generate F-listed wastes – used or spent solvents. (Refer to Table 2.) In order for a waste to be classified as F001, F002, F004, F005, it must contain a total of 10 percent or more by volume, of one or more of the chemicals in the category. For example, a waste solvent blend containing 10 percent methylene chloride and 90 percent water, would be classified as an F002 waste.

For the F003 category, a waste must either be 100 percent of any of the chemicals in the F003 category or contain one of the chemicals in the category and 10 percent or more of any chemicals in F001, F002, F004, or F005 categories. Any waste chemical in the category originally used as a “technical grade” is also considered 100 percent. For example, a waste solvent blend containing 5 percent xylene, 15 percent methylene chloride, and 80 percent water would be classified as an F003 and F002 hazardous waste. Likewise, a waste solvent blend containing 15 percent xylene, 15 percent methylene chloride, and 70 percent water would also be classified as F002 and F003. However, a waste solvent blend containing 25 percent xylene, 5 percent methylene chloride, and 70 percent water would not be classified as an F-listed waste.

The U and P-listed wastes are for discarded, unused commercial chemical products that are either 100 percent pure, technical grade or any formulation where the chemical is the active ingredient. K-listed wastes are those from specific industrial manufacturing processes. A printer is required to determine if a waste is hazardous or nonhazardous. This determination can be performed by using available information (your knowledge) or by testing the waste.

Applying knowledge of the physical characteristics of a chemical or material, and how it is used in a given process, is the most cost effective method of hazardous waste determination. This can be done by checking the Material Safety Data Sheet (MSDS) provided by the manufacturer. If a material is chemically unchanged (e.g., blanket or roller wash), the MSDS would be representative of the material as a waste. For example, is the flash point of the chemical 140°F or less? If so, the waste is a D001 EPA Ignitable Waste. Does the chemical have a pH less than or equal to 2.0, or greater than or equal to 12.5? If so, it is a D002 EPA Corrosive Waste. The MSDS can also be directly compared with the lists (F, U, P, and K lists) of hazardous wastes. Of the U, P, or K listed wastes, printers may generate U-listed wastes found in Table 3.

**Remember: if you classify a nonhazardous waste as hazardous, then it is regulated as hazardous.** The printer should understand the definition of a hazardous waste, so that wastes can be properly classified and disposed.

**Table 1 Characteristic Hazardous Wastes**

(Typical printer wastes by EPA Waste Code are bold.)

- D001** Ignitable: Has a flash point of 140°F or less.
- D002** Corrosive: Liquids that easily corrode materials or human tissue and have a pH less or equal to 2 or greater than or equal to 12.5.
- D003 Reactive: Potentially explosive or produces toxic gases when mixed with water, air or other incompatible materials.
- D004 - D043** Toxic by the laboratory test, Toxicity Characteristic Leaching Procedure (TCLP). Refer below.

Compound	Waste Code	Regulatory Level (ppm)	Compound	Waste Code	Regulatory Level (ppm)
Arsenic	D004	5.0	Hexachlorobenzene	D032	0.13
<b>Barium</b>	<b>D005</b>	<b>100.0</b>	Hexachloro-1,3-butadiene	D033	0.5
Benzene	D018	0.5	Hexachloroethane	D034	3.0
Cadmium	D006	1.0	Lead	D008	5.0
Carbon Tetrachloride	D019	0.5	Lindane	D013	0.4
Chlordane	D020	0.03	Mercury	D009	0.2
Chlorobenzene	D021	100.0	Methoxychlor	D014	10.0
Chloroform	D022	6.0	<b>Methyl ethyl ketone</b>	<b>D035</b>	<b>200.0</b>
Chromium	D007	5.0	Nitrobenzene	D036	2.0
o-Cresol	D023	200.0	Pentachlorophenol	D037	100.0
m-Cresol	D024	200.0	Pyridine	D038	5.0
p-Cresol	D025	200.0	Selenium	D010	1.0
2,4-D	D016	10.0	<b>Silver</b>	<b>D011</b>	<b>5.0</b>
1,4-Dichlorobenzene	D027	7.5	<b>Tetrachloroethylene</b>	<b>D039</b>	<b>0.7</b>
1,2-Dichloroethane	D028	0.5	Toxaphene	D015	0.5
1,1-Dichloroethylene	D029	0.7	<b>Trichloroethylene</b>	<b>D040</b>	<b>0.5</b>
2,4-Dinitrotoluene	D030	0.13	2,4,5-Trichlorophenol	D041	400.0
Endrin	D012	0.02	2,4,6-Trichlorophenol	D042	2.0
Heptachlor	D031	0.008	Vinyl Chloride	D043	0.2

**Table 2 F-Listed Solvent Hazardous Wastes**

(Typical printer solvents and EPA Waste Codes are bold.)

- F001 Halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons.
- F002** Halogenated solvents: **tetrachloroethylene, trichloroethylene, methylene chloride**, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,1,2-trifluoroethane, orthodichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane.
- F003** Ignitable nontoxic solvents: **xylene, acetone**, ethyl acetate, **ethyl benzene**, ethyl ether, methyl isobutyl ketone (MIBK), n-butyl alcohol, cyclohexanone, and **methanol**.
- F004 Toxic non-halogenated solvents: cresols, cresylic acid, and nitrobenzene.
- F005** Ignitable toxic solvents: **toluene, methyl ethyl ketone (MEK)**, carbon disulfide, isobutanol, **benzene**, pyridine, 2-ethoxyethanol, and 2-nitropropane.

**Table 3 U-Listed Wastes That May be Generated by Printers**

Name/Description	Waste Code	Name/Description	Waste Code
Acetone	U002	Methyl chloroform	U226
Benzene	U019	Methylene chloride	U080
Carbon tetrachloride	U211	Methyl ethyl ketone (MEK)	U159
Chromium	D007	Methyl isobutyl ketone	U161
Cumene	U055	Tetrachloroethylene	U210
Cyclohexane	U056	(perchloroethylene)	
Dibutyl phthalate	U069	Toluene	U220
Ethyl acetate	U112	Toluene diisocyanate	U223
Ethanol, 2-ethoxy	U359	Trichloroethylene	U228
Ethylene glycol monoethyl	U359	Vinyl chloride	U043
ether		Xylene	U239
Formaldehyde	U122		
Methanol	U154		

# Typical Waste Profile Sheet

## General Information

Department \_\_\_\_\_ Waste Coordinator \_\_\_\_\_

Waste Name \_\_\_\_\_

Process Generating the Waste \_\_\_\_\_  
\_\_\_\_\_

Waste Generation Rate (Gallons or pounds per month) \_\_\_\_\_

Current Disposal Procedure \_\_\_\_\_  
\_\_\_\_\_

One-Time Disposal ? Yes \_\_\_ No \_\_\_

## Waste Classification

Nonhazardous \_\_\_\_\_ Residual Waste \_\_\_\_\_

Hazardous \_\_\_\_\_ If so, list the EPA Waste Codes. \_\_\_\_\_

## Waste Composition

Tests of Representative Sample Yes \_\_\_ No \_\_\_ (attach test results)

Process Knowledge Yes \_\_\_ No \_\_\_ (attach supporting documentation, e.g. MSDSs)

	<u>Waste Composition</u>	<u>Percent</u>
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____

General Parameters Flash Point \_\_\_\_\_°F pH \_\_\_\_\_

Physical State at 70 °F Solid \_\_\_ Liquid \_\_\_ Semi-Solid \_\_\_ Gas \_\_\_

Waste Packaging Type & Size (e.g. 55 gal drum) \_\_\_\_\_

Waste Coordinator Signature \_\_\_\_\_ Date \_\_\_\_\_



## List of Local Sewer Authorities

This is a listing of local sewer authorities by DEP region. If your city, town, borough or township is not listed, consult your local white pages or government blue pages.

<b>County</b>	<b>AuthorityName</b>	<b>Phone</b>	<b>County</b>	<b>AuthorityName</b>	<b>Phone</b>
ADAMS	BERWICK TWP MUNICIPAL	(717) 624-1829	BEDFORD	EAST ST CLAIR TWP	(814) 839-4841
ADAMS	CARROLL VALLEY SEWER & WATER AUTHORITY	(717) 642-8269	BEDFORD	EVERETT, BOROUGH OF, AREA	(814) 652-9202
ADAMS	CONEWAGO TWP MUNICIPAL AUTHORITY	(717) 637-0411	BEDFORD	HYNDMAN BOROUGH MUNICIPAL AUTHORITY	(814) 842-6546
ADAMS	CUMBERLAND TWP AUTHORITY	(717) 337-2133	BEDFORD	LIBERTY TWP MUNICIPAL	(814) 635-4150
ADAMS	EAST BERLIN MUNICIPAL AUTHORITY	(717) 259-9224	BEDFORD	MANN'S CHOICE-HARRISON TWP	(814) 623-4807
ADAMS	FAIRFIELD MUNICIPAL AUTHORITY	(717) 642-6557	BEDFORD	NEW PARIS-NAPIER AUTHORITY	(814) 733-4770
ADAMS	GETTYSBURG MUNICIPAL AUTHORITY	(717) 334-6738	BEDFORD	SAXTON BOROUGH MUNICIPAL AUTHORITY	(814) 635-4070
ADAMS	LAKE MEADE MUNICIPAL AUTHORITY	(717) 259-9998	BEDFORD	SHELLSBURG MUNICIPAL AUTHORITY	(814) 733-2809
ADAMS	NEW OXFORD MUNICIPAL AUTHORITY	(717) 624-9399	BEDFORD	SNAKE SPRING TP MUNICIPAL AUTHORITY	(814) 623-2627
ADAMS	POSSUM VALLEY MUNICIPAL AUTHORITY.	(717) 677-8551	BEDFORD	WEST PROVIDENCE TWP	(814) 652-5538
ADAMS	READING TWP MUNICIPAL AUTHORITY	(717) 624-2300	BEDFORD	WEST ST CLAIR TP-PLEASANTVILLE	(814) 839-4349
ADAMS	STRABAN TWP AUTHORITY	(717) 334-4833	BERKS	AMITY TWP MUNICIPAL AUTHORITY	(610) 689-6000
ADAMS	WHITE RUN REGIONAL MUNICIPAL	(717) 334-7476	BERKS	ANTIETAM VALLEY MUNICIPAL AUTHORITY	(610) 779-0150
ADAMS	YORK SPRINGS MUNICIPAL AUTHORITY	(717) 528-4032	BERKS	BECHTELSVILLE, BOROUGH OF, MUNICIPAL	
ALLEGHENY	ALLEGHENY CO SANITARY AUTHORITY	(412) 766-4810	BERKS	BERKS-MONTGOMERY MUNICIPAL AUTHORITY	(610) 367-1460
ALLEGHENY	ALLEGHENY VALLEY JOINT SEWER AUTHORITY	(412) 828-7227	BERKS	BERN TWP MUNICIPAL AUTHORITY	(610) 916-9919
ALLEGHENY	BALDWIN, BOROUGH OF, MUNICIPAL AUTHORITY		BERKS	CAERNARVON TWP MUN SEW AUTHORITY	(610) 286-1017
ALLEGHENY	BELL ACRES MUNICIPAL AUTHORITY	(412) 741-2314	BERKS	CENTRE TWP MUNICIPAL	(610) 926-5354
ALLEGHENY	CLAIRTON MUNICIPAL AUTHORITY	(412) 233-3246	BERKS	CUMRU, MUNICIPAL AUTHORITY OF	(610) 777-1343
ALLEGHENY	COLLIER TWP MUNICIPAL AUTHORITY	(412) 279-4941	BERKS	DOUGLASS TWP MUNICIPAL AUTHORITY	(610) 667-8500
ALLEGHENY	CORAOPOLIS MUNICIPAL SANITARY AUTHORITY	(412) 264-3002	BERKS	HAMBURG MUNICIPAL AUTHORITY, BERKS CO	(610) 562-7821
ALLEGHENY	CRESCENT-SOUTH HEIGHTS	(724) 457-7376	BERKS	HEIDELBERG, TWP OF, MUN AUTHORITY	(610) 693-3197
ALLEGHENY	DEER CREEK DRAINAGE BASIN AUTHORITY	(724) 265-5315	BERKS	KENHORST, BORO OF, MUNICIPAL AUTHORITY	(610) 777-7327
ALLEGHENY	DRAVOSBURG SANITARY AUTHORITY		BERKS	KUTZTOWN MUNICIPAL AUTHORITY	(610) 683-6131
ALLEGHENY	DUQUESNE, CITY OF, SANITARY AUTHORITY	(412) 466-5146	BERKS	LAURELDALE MUNICIPAL AUTHORITY, BERKS CO	
ALLEGHENY	ELIZABETH BOROUGH MUNICIPAL AUTHORITY	(412) 384-3686	BERKS	LEESPORT BOROUGH AUTHORITY	(610) 926-2060
ALLEGHENY	ELIZABETH TWP SANITARY AUTHORITY	(412) 751-2880	BERKS	LOWER ALSACE TWP AUTHORITY	
ALLEGHENY	FAWN TWP SEWAGE AUTHORITY OF	(724) 224-1905	BERKS	LOWER HEIDELBERG, TWP OF,	(610) 670-7794
ALLEGHENY	FORWARD, TWP OF, SEWAGE		BERKS	LYONS BOROUGH MUNICIPAL AUTHORITY	(610) 682-2639
ALLEGHENY	FRANKLIN PARK AUTHORITY		BERKS	MAIDENCREEK TWP AUTHORITY	(610) 926-4173
ALLEGHENY	GIRTY'S RUN JOINT SEWER AUTHORITY.	(412) 821-3497	BERKS	MOHNTON BOROUGH AUTHORITY	
ALLEGHENY	INDIANA TWP MUNICIPAL	(412) 767-5333	BERKS	MUHLBERG TWP AUTHORITY	(610) 929-4709
ALLEGHENY	KENNEDY TWP MUNICIPAL SEWAGE		BERKS	OLEY TWP MUNICIPAL AUTHORITY	(610) 987-3423
ALLEGHENY	LEETSDALE, BORO OF, MUNICIPAL AUTHORITY	(724) 266-4063	BERKS	PERRY TWP MUNICIPAL AUTHORITY	(610) 562-2315
ALLEGHENY	LIBERTY BOROUGH SEWER AUTHORITY	(412) 678-3286	BERKS	ROBESONIA MUNICIPAL AUTHORITY	(610) 693-3474
ALLEGHENY	MARSHALL TWP MUN SANITARY AUTHORITY	(724) 935-6260	BERKS	ROBESONIA-WERNERSVILLE	(610) 678-5115
ALLEGHENY	MCCANDLESS TWP SANITARY AUTHORITY	(412) 366-2700	BERKS	SOUTH HEIDELBERG, MUNICIPAL	(610) 678-9652
ALLEGHENY	MCKEESPORT, CITY OF, MUNICIPAL AUTHORITY	(412) 673-8276	BERKS	TEMPLE BOROUGH AUTHORITY	
ALLEGHENY	MOON TWP MUNICIPAL AUTHORITY	(412) 264-4300	BERKS	TOPTON, BOROUGH OF, MUNICIPAL	(610) 682-2541
ALLEGHENY	NORTH VERSAILLES TWP	(412) 823-0629	BERKS	UNION TWP MUNICIPAL	(610) 385-3769
ALLEGHENY	OAKDALE MUNICIPAL AUTHORITY	(724) 693-9740	BERKS	WASHINGTON, THE TWP OF,	(610) 845-3697
ALLEGHENY	OHIO TWP SANITARY AUTHORITY	(412) 364-4549	BERKS	WERNERSVILLE MUNICIPAL AUTHORITY	(610) 678-4711
ALLEGHENY	PINE TWP AUTHORITY	(724) 625-1591	BERKS	WEST LAWN BOROUGH AUTHORITY	
ALLEGHENY	PLEASANT HILLS AUTHORITY	(412) 655-5033	BERKS	WINDSOR TWP MUNICIPAL	(610) 562-3769
ALLEGHENY	PLUM BOROUGH MUNICIPAL		BERKS	WOMELSDORF SEWER AUTHORITY	(610) 589-4725
ALLEGHENY	PLUM BOROUGH MUNICIPAL AUTHORITY	(412) 798-9183	BERKS	WYOMISSING VALLEY JOINT MUN AUTHORITY	(610) 376-1756
ALLEGHENY	RANKIN, BOROUGH OF, MUNICIPAL		BLAIR	ALTOONA CITY AUTHORITY	(814) 949-2224
ALLEGHENY	ROBINSON, TWP OF,	(412) 923-2411	BLAIR	ANTIS TWP SEWER AUTHORITY	(814) 742-7361
ALLEGHENY	ROSS TWP AUTHORITY		BLAIR	BELLWOOD BOROUGH AUTHORITY	(814) 742-8591
ALLEGHENY	SEWICKLEY HILLS-KILBUCK RUN		BLAIR	BELLWOOD BOROUGH AUTHORITY	
ALLEGHENY	SOUTH FAYETTE TP MUNICIPAL AUTHORITY	(412) 221-1665	BLAIR	BLAIR TWP WATER & SEWER AUTHORITY	(814) 695-6300
ALLEGHENY	SOUTH PARK TWP SEWER AUTHORITY		BLAIR	CENTRAL BLAIR CO SANITARY AUTHORITY	(814) 942-1796
ALLEGHENY	UPPER ALLEGHENY JOINT SANITARY	(724) 224-2245	BLAIR	FREEDOM TWP WATER & SEW AUTHORITY	(814) 695-8051
ALLEGHENY	VERSAILLES BOROUGH AUTHORITY		BLAIR	GREENFIELD TWP MUNICIPAL AUTHORITY	(814) 239-5313
ALLEGHENY	WEST ELIZABETH SANITARY AUTHORITY	(412) 384-2322	BLAIR	HOLLIDAYSBURG SEWER AUTHORITY	(814) 695-7543
ALLEGHENY	WEST MIFFLIN SANITARY SEWER	(412) 466-3887	BLAIR	MARTINSBURG MUNICIPAL AUTHORITY	(814) 793-3213
ALLEGHENY	WEST VIEW, BORO OF, MUNICIPAL AUTHORITY	(412) 931-3292	BLAIR	NORTHERN BLAIR CO REGIONAL	(814) 684-1177
ALLEGHENY	WHITE OAK BOROUGH AUTHORITY	(412) 672-2773	BLAIR	ROARING SPRING MUNICIPAL AUTHORITY	(814) 224-4814
ALLEGHENY	WILKINS TWP AUTHORITY		BLAIR	TYRONE BOROUGH SEWER AUTHORITY	
ARMSTRONG	APPLEWOLD BOROUGH MUNICIPAL AUTHORITY	(724) 543-1224	BRADFORD	ATHENS TWP AUTHORITY	(570) 888-2815
ARMSTRONG	ARMSTRONG COUNTY GENERAL	(724) 548-3223	BRADFORD	CANTON BOROUGH AUTHORITY	(570) 673-8383
ARMSTRONG	BRADY'S BEND WATER & SEWER AUTHORITY	(724) 526-3373	BRADFORD	NORTH TOWANDA TWP WATER &	
ARMSTRONG	EAST KITTANNING AUTHORITY	(724) 545-7278	BRADFORD	SOUTH WAVERLY BOROUGH MUN AUTHORITY	(570) 888-2125
ARMSTRONG	EASTERN ARMSTRONG CO MUN AUTHORITY	(724) 354-2540	BRADFORD	TOWANDA MUNICIPAL AUTHORITY	(570) 265-2696
ARMSTRONG	FORD CITY BOROUGH MUNICIPAL	(724) 763-7001	BRADFORD	VALLEY JOINT SEWER AUTHORITY	(570) 888-2253
ARMSTRONG	FREESTON BOROUGH MUNICIPAL SEWAGE		BRADFORD	WYALUSING MUNICIPAL AUTHORITY	(570) 746-1707
ARMSTRONG	GILPIN TWP SEWAGE AUTHORITY	(724) 845-4561	BRADFORD	WYSOX TWP MUNICIPAL	(570) 265-5615
ARMSTRONG	KITTANNING, BORO OF, MUNICIPAL AUTHORITY	(724) 543-2091	BUCKS	BEDMINSTER MUNICIPAL AUTHORITY	(215) 795-2190
ARMSTRONG	PARKS TWP MUNICIPAL AUTHORITY	(412) 567-7301	BUCKS	BENSALEM TWP AUTHORITY	(215) 633-3600
ARMSTRONG	SHANNOCK VALLEY GENERAL	(724) 543-1527	BUCKS	BRISTOL BOROUGH WATER & SEWER	(215) 788-3828
ARMSTRONG	WEST HILLS AREA WATER	(724) 545-9126	BUCKS	BRISTOL TWP AUTHORITY	(215) 781-0872
BEAVER	ALIQUIPPA MUNICIPAL WATER AUTHORITY	(724) 375-5525	BUCKS	BUCKS CO WATER & SEWER AUTHORITY	(215) 343-2538
BEAVER	AMBRIDGE, BORO OF, MUNICIPAL AUTHORITY	(724) 266-7810	BUCKS	CHALFONT NEW BRITAIN TWP	(215) 345-1225
BEAVER	BADEN, BOROUGH OF, MUNICIPAL AUTHORITY	(724) 869-3700	BUCKS	CROSS KEYS AREA SEWAGE AUTHORITY	
BEAVER	BEAVER BOROUGH MUNICIPAL AUTHORITY	(724) 773-6705	BUCKS	DOYLESTOWN BOROUGH AUTHORITY	(215) 345-4140
BEAVER	BIG BEAVER MUNICIPAL AUTHORITY	(724) 774-5440	BUCKS	FALLS, TWP OF, AUTHORITY	(215) 949-9000
BEAVER	BRIDGEWATER, BOROUGH OF, MUN AUTHORITY	(724) 775-3038	BUCKS	HILLTOWN TWP WATER &	(215) 453-6065
BEAVER	BRIGHTON TWP SEWER AUTHORITY	(724) 774-4802	BUCKS	LANGHORNE BOROUGH AUTHORITY	(215) 757-4121
BEAVER	CENTER TWP SEWER AUTHORITY	(724) 774-0326	BUCKS	LANGHORNE MANOR, BOROUGH OF	(215) 750-0110
BEAVER	CHIPPEWA TWP SANITARY AUTHORITY	(724) 843-8177	BUCKS	LOWER BUCKS CO JOINT MUNICIPAL AUTHORITY	(215) 945-7400
BEAVER	DAUGHERTY TWP MUNICIPAL AUTHORITY	(724) 846-5337	BUCKS	LOWER SOUTHAMPTON, BUCKS CO,	
BEAVER	ECONOMY BOROUGH MUNICIPAL	(412) 869-3201	BUCKS	MIDDLETOWN TWP, BUCKS	(215) 943-0300
BEAVER	FRANKLIN, TWP OF, MUNICIPAL AUTHORITY	(724) 758-9701	BUCKS	MILFORD-TRUMBAUERSVILLE AREA	(215) 538-1417
BEAVER	HARMONY TWP MUNICIPAL AUTHORITY	(724) 266-1910	BUCKS	MORRISVILLE, BOROUGH OF, MUN AUTHORITY	(215) 295-8181
BEAVER	HOPEWELL TWP AUTHORITY	(724) 378-1309	BUCKS	NEWTOWN, BUCKS CO, JOINT MUN AUTHORITY	(215) 968-4109
BEAVER	INDUSTRY BOROUGH MUNICIPAL AUTHORITY	(724) 643-9522	BUCKS	NORTHAMPTON BUCKS CO MUN AUTHORITY	(215) 367-8515
BEAVER	MONACA BOROUGH MUNICIPAL AUTHORITY		BUCKS	PENNDDEL MUNICIPAL AUTHORITY	
BEAVER	NEW SEWICKLEY TWP MUN AUTHORITY	(724) 774-2186	BUCKS	PENNRIDGE WASTEWATER TREATMENT	(215) 257-6355
BEAVER	NORTH SEWICKLEY TWP	(724) 846-8502	BUCKS	PERKASIE BOROUGH AUTHORITY	(215) 257-3654
BEAVER	ROCHESTER AREA JOINT SEWER AUTHORITY	(724) 774-2550	BUCKS	PLUMSTEAD TWP MUNICIPAL	
BEAVER	ROCHESTER TWP SEWER AUTHORITY	(724) 774-4615	BUCKS	UPPER SOUTHAMPTON SEWER AUTHORITY	(215) 364-1390
BEAVER	VANPORT TWP MUNICIPAL AUTHORITY	(412) 775-1038	BUCKS	WARMINSTER TWP MUNICIPAL	(215) 675-3301
BEAVER	WHITE, TWP OF, MUNICIPAL AUTHORITY		BUCKS	WARRINGTON TWP MUNICIPAL	(215) 343-9350
BEDFORD	BEDFORD TWP MUNICIPAL AUTHORITY	(814) 623-7879	BUCKS	WARWICK TWP WATER & SEWER	(215) 343-3584
BEDFORD	BEDFORD TWP SEWER AUTHORITY		BUCKS	YARDLEY BOROUGH SEWER AUTHORITY	(215) 493-2045
BEDFORD	BEDFORD, BORO OF, MUNICIPAL AUTHORITY	(814) 623-8192	BUTLER	BEAR CREEK WATER SHED AUTHORITY	(724) 756-4600
BEDFORD	CHESTNUT RIDGE AREA JOINT	(814) 839-4306	BUTLER	BREAKNECK CREEK REGIONAL	(724) 625-1699
BEDFORD	EAST PROVIDENCE TWP MUN AUTHORITY	(814) 735-4215	BUTLER	BUFFALO TWP, MUNICIPAL AUTHORITY OF	(724) 295-2703

County	AuthorityName	Phone	County	AuthorityName	Phone
BUTLER	BUTLER AREA SEWER AUTHORITY	(412) 282-1978	CLARION	STRATTANVILLE BORO MUNICIPAL AUTHORITY	(814) 764-5359
BUTLER	CENTER TWP MUN WATER & SEW AUTHORITY	(724) 287-1945	CLARION	WASHINGTON TWP MUNICIPAL	(814) 354-2211
BUTLER	CHICORA BOROUGH SEWER AUTHORITY	(724) 445-0150	CLEARFIELD	BCI MUNICIPAL AUTHORITY	(814) 672-4103
BUTLER	CRANBERRY TWP MUNICIPAL WATER	(724) 776-4171	CLEARFIELD	BRISBIN BOROUGH SEWAGE AND	(814) 378-5924
BUTLER	DESHON AREA SANITARY DISPOSAL		CLEARFIELD	BRISBIN, HOUTZDALE, WOODWARD	(814) 378-7676
BUTLER	EAST BUTLER SEWER AUTHORITY		CLEARFIELD	CHESTER HILL, BOR OF, MUNICIPAL AUTHORITY	
BUTLER	EVANS CITY, BORO OF, MUNICIPAL AUTHORITY	(724) 538-8320	CLEARFIELD	CLEARFIELD MUNICIPAL AUTHORITY	(814) 765-9609
BUTLER	FORWARD, TWP OF, MUNICIPAL AUTHORITY		CLEARFIELD	CURWENSVILLE MUNICIPAL AUTHORITY	(814) 236-2631
BUTLER	HARMONY, BORO OF, MUNICIPAL AUTHORITY		CLEARFIELD	DUBOIS SEWAGE AUTHORITY	(814) 371-2002
BUTLER	JACKSON TWP MUNICIPAL AUTHORITY		CLEARFIELD	HOUTZDALE BORO MUN SEWER AUTHORITY	(814) 378-5739
BUTLER	MARS, BOROUGH OF, MUNICIPAL AUTHORITY	(724) 625-1858	CLEARFIELD	HUSTON TWP SEWER AUTHORITY	(814) 637-5650
BUTLER	MERIDIAN WATER & SEWER AUTHORITY	(724) 283-3430	CLEARFIELD	MAHAFFEY BOROUGH MUNICIPAL	(814) 277-6097
BUTLER	MIDDLESEX TWP WATER & SEWER AUTHORITY	(724) 898-3571	CLEARFIELD	MORRIS TWP MUN WATER AUTHORITY	(814) 345-6535
BUTLER	NORTHEAST PARKER TWP AUTHORITY	(724) 399-2588	CLEARFIELD	MOSHANNON VALLEY JOINT SEWER AUTHORITY	(814) 342-6203
BUTLER	NORTHWEST SANITARY SEWER		CLEARFIELD	SANDY TWP MUNICIPAL AUTHORITY	(814) 371-4220
BUTLER	PENN TWP SANITARY SEWER SYS AUTHORITY	(724) 586-1165	CLEARFIELD	WALLACETON-BOGGS MUNICIPAL AUTHORITY	(814) 342-4400
BUTLER	SAXONBURG, BORO OF, MUNICIPAL AUTHORITY	(724) 352-1400	CLEARFIELD	WOODLAND-BIGLER AREA AUTHORITY	(814) 587-2966
BUTLER	SLIPPERY ROCK MUNICIPAL AUTHORITY	(724) 794-6552	CLEARFIELD	WOODWARD TWP SEWER AND WATER	(814) 378-8211
BUTLER	SOUTH BUTLER TWP SEWER SYS AUTHORITY		CLINTON	AVIS BOROUGH AUTHORITY	(570) 748-7771
BUTLER	WESTERN BUTLER COUNTY AUTHORITY	(724) 452-5501	CLINTON	BALD EAGLE TWP AUTHORITY	
CAMBRIA	ADAMS TWP MUNICIPAL AUTHORITY	(814) 495-5614	CLINTON	BEECH CREEK BOROUGH AUTHORITY	(570) 962-2291
CAMBRIA	BARR AREA MUNICIPAL AUTHORITY	(814) 948-4444	CLINTON	CASTANEA TWP AUTHORITY	(570) 748-9070
CAMBRIA	BLACKLICK TWP SEWER AUTHORITY		CLINTON	EAST NITTANY VALLEY JOINT	(570) 726-3743
CAMBRIA	CAMBRIA TWP SEWER AUTHORITY		CLINTON	FLEMINGTON, BOROUGH OF, AUTHORITY	
CAMBRIA	CARDIFF SEWER AUTHORITY		CLINTON	GREENE, TWP OF, MUNICIPAL AUTHORITY	(570) 725-2355
CAMBRIA	CARROLLTOWN BORO MUNICIPAL AUTHORITY	(814) 344-9303	CLINTON	LAMAR, TWP OF, MUNICIPAL AUTHORITY	(570) 726-4973
CAMBRIA	CENTRAL MAINLINE SEWER AUTHORITY	(814) 886-5359	CLINTON	LOGANTON BOROUGH AUTHORITY	(570) 893-4080
CAMBRIA	CRESSON TWP MUNICIPAL AUTHORITY	(814) 886-2793	CLINTON	MILL HALL BOROUGH AUTHORITY	(570) 726-4008
CAMBRIA	CRESSON, BORO OF, MUNICIPAL AUTHORITY	(814) 886-2139	CLINTON	PINE CREEK MUNICIPAL AUTHORITY	(570) 398-7897
CAMBRIA	EAST CONEMAUGH, BOROUGH OF,	(814) 539-9563	CLINTON	PORTER TWP MUNICIPAL AUTHORITY	(570) 748-6505
CAMBRIA	FERNDALE BOROUGH MUNICIPAL AUTHORITY		CLINTON	WAYNE TWP MUNICIPAL AUTHORITY	(570) 769-6276
CAMBRIA	FOREST HILLS MUNICIPAL AUTHORITY	(814) 495-5614	CLINTON	WESTERN CLINTON CO MUNICIPAL AUTHORITY	(570) 923-2517
CAMBRIA	FRANKLIN BOROUGH MUNICIPAL AUTHORITY		CLINTON	WOODWARD TWP AUTHORITY	(570) 748-6871
CAMBRIA	GALLITZIN BOROUGH SEWER &	(814) 886-8871	COLUMBIA	BERWICK AREA JOINT SEWER AUTHORITY	(570) 752-2723
CAMBRIA	GALLITZIN TWP AUTHORITY	(814) 886-8565	COLUMBIA	BLOOMSBURG, TOWN OF, MUN AUTHORITY	(570) 784-7703
CAMBRIA	GREATER JOHNSTOWN SEWER AUTHORITY	(814) 266-2922	COLUMBIA	CATAWISSA, BOROUGH OF, MUNICIPAL	
CAMBRIA	HASTINGS AREA SEWER AUTHORITY	(814) 247-6663	COLUMBIA	GREENWOOD TWP MUNICIPAL AUTHORITY	(570) 458-0212
CAMBRIA	HIGHLAND SEWER & WATER AUTHORITY	(814) 266-3146	COLUMBIA	HEMLOCK TWP SEWER AUTHORITY	(570) 784-6178
CAMBRIA	JACKSON EAST TAYLOR SEWER	(814) 749-0725	COLUMBIA	MADISON TWP MUNICIPAL AUTHORITY	(570) 458-0224
CAMBRIA	JOHNSTOWN MUNICIPAL AUTHORITY		COLUMBIA	MUNICIPAL AUTHORITY OF LOCUST TWP	(570) 799-5710
CAMBRIA	LORETTO, BORO OF, MUN SEWER AUTHORITY		COLUMBIA	ORANGE TWP SEWER AUTHORITY	(570) 864-2376
CAMBRIA	LOWER YODER MUNICIPAL AUTHORITY		COLUMBIA	SCOTT TWP AUTHORITY	(570) 784-6639
CAMBRIA	MYLO PARK WATER & SEWER AUTHORITY	(814) 472-8810	CRAWFORD	BLOOMFIELD TWP SEWAGE AUTHORITY	(814) 694-3409
CAMBRIA	NANTY GLO SANITARY SEWER AUTHORITY	(814) 749-0331	CRAWFORD	CAMBRIDGE, TWP OF, MUNICIPAL	(814) 398-2231
CAMBRIA	NANTY GLO SEWER AUTHORITY	(814) 749-0331	CRAWFORD	CONNEAUT LAKE JOINT MUNICIPAL AUTHORITY	(814) 382-8315
CAMBRIA	PATTON MUNICIPAL AUTHORITY	(814) 674-3641	CRAWFORD	CONNEAUT LAKE, BOROUGH OF, MUNICIPAL	(814) 336-2379
CAMBRIA	PEGASUS SEWER AUTHORITY	(814) 536-8400	CRAWFORD	NORTH & SOUTH SHENANGO JOINT	(724) 932-3138
CAMBRIA	PORTAGE AREA SEWER AUTHORITY	(814) 736-9642	CRAWFORD	NORTHWEST CRAWFORD COUNTY	(814) 587-3910
CAMBRIA	SANKERTOWN BOROUGH	(814) 886-4654	CRAWFORD	SAEGERTOWN AREA SEWER AUTHORITY	(814) 763-2789
CAMBRIA	STONYCREEK TWP AUTHORITY		CRAWFORD	SPARTANSBURG BOROUGH MUN AUTHORITY	
CAMBRIA	SUMMERHILL, TWP OF, MUN AUTHORITY		CRAWFORD	SPRINGBORO, BOROUGH OF, MUN AUTHORITY	
CAMBRIA	UPPER YODER TWP AUTHORITY	(814) 255-5243	CRAWFORD	TITUSVILLE MUNICIPAL AUTHORITY	
CAMBRIA	WEST BRANCH SEWER AUTHORITY	(814) 948-4723	CRAWFORD	VERNON TWP SANITARY AUTHORITY	(814) 336-2550
CAMERON	MID-CAMERON AUTHORITY	(814) 486-0481	CRAWFORD	WEST MEAD TWP AUTHORITY	(814) 336-2553
CAMERON	SHIPPEN TWP MUNICIPAL AUTHORITY		CUMBERLAND	CARLISLE BORO SEWER SYSTEM AUTHORITY	(717) 249-4422
CAMERON	BANKS TWP MUNICIPAL AUTHORITY	(570) 454-2386	CUMBERLAND	CARLISLE SUBURBAN AUTHORITY	(717) 243-8209
CAMERON	BEAVER MEADOWS MUNICIPAL AUTHORITY	(570) 455-9335	CUMBERLAND	CUMBERLAND-FRANKLIN JOINT	(717) 532-6949
CAMERON	CENTRAL CARBON MUNICIPAL AUTHORITY	(610) 377-4002	CUMBERLAND	EAST PENNSBORO TWP AUTHORITY	(717) 732-0711
CAMERON	COALDALE, LANSFORD, SUMMIT HILL	(570) 645-2445	CUMBERLAND	LOWER ALLEN TWP AUTHORITY	(717) 774-0610
CAMERON	LOWER TOWAMENSING TP AUTHORITY	(610) 826-2522	CUMBERLAND	MECHANICSBURG, BOROUGH OF,	
CAMERON	MAHONING TP MUNICIPAL AUTHORITY	(570) 386-4002	CUMBERLAND	MIDDLESEX TWP MUNICIPAL AUTHORITY	(717) 243-0674
CAMERON	WEISSPORT MUNICIPAL AUTHORITY	(610) 377-4057	CUMBERLAND	MOUNT HOLLY SPRINGS BOROUGH AUTHORITY	(717) 486-7601
CAMERON	WESTERN POCONOS MUNICIPAL AUTHORITY		CUMBERLAND	NEW CUMBERLAND BOROUGH AUTHORITY	
CENTRE	CENTRE HALL-POTTER SEWER AUTHORITY	(814) 364-9195	CUMBERLAND	NEWBURG-HOPEWELL JOINT AUTHORITY	(717) 423-6180
CENTRE	COLLEGE-HARRIS JOINT AUTHORITY	(814) 238-8370	CUMBERLAND	NEWVILLE BOROUGH WATER & SEWER	(717) 776-7633
CENTRE	FERGUSON TWP AUTHORITY	(814) 238-3613	CUMBERLAND	SHIPPENSBURG BOROUGH AUTHORITY	(717) 532-2147
CENTRE	HOWARD BOROUGH AUTHORITY	(814) 625-2351	CUMBERLAND	SILVER SPRING TWP AUTHORITY	(717) 766-0178
CENTRE	LIBERTY TWP SEWER AUTHORITY	(570) 962-2722	CUMBERLAND	SOUTH MIDDLETON TWP MUN AUTHORITY	(717) 258-6476
CENTRE	MID-CENTRE COUNTY AUTHORITY	(814) 355-8435	CUMBERLAND	UPPER ALLEN TWP AUTHORITY	(717) 766-0756
CENTRE	MOUNTAINTOP AREA MUNICIPAL AUTHORITY	(814) 387-4321	CUMBERLAND	WEST FAIRVIEW MUNICIPAL AUTHORITY	(717) 761-1222
CENTRE	PATTON-FERGUSON JOINT AUTHORITY	(814) 238-8370	CUMBERLAND	WEST PENNSBORO MUNICIPAL AUTHORITY	(717) 243-8220
CENTRE	PORT MATILDA BOROUGH AUTHORITY	(814) 692-8141	DAUPHIN	BERRYSBURG MUNICIPAL AUTHORITY	(717) 362-9654
CENTRE	SPRING CREEK AREA AUTHORITY		DAUPHIN	DERRY TWP MUNICIPAL AUTHORITY	(717) 566-3237
CENTRE	SPRING-BENNER-WALKER JOINT AUTHORITY	(814) 355-4778	DAUPHIN	ELIZABETHVILLE AREA AUTHORITY	(717) 362-3582
CENTRE	UNIVERSITY AREA JOINT AUTHORITY	(814) 238-5361	DAUPHIN	GRATZ BOROUGH MUNICIPAL AUTHORITY	(717) 365-3821
CHESTER	ATGLEN BOROUGH SEWER AUTHORITY	(610) 593-6854	DAUPHIN	HALIFAX MUNICIPAL AUTHORITY	(717) 896-3457
CHESTER	CALN TWP, CHESTER CO, MUN AUTHORITY		DAUPHIN	LONDONDERRY TWP GENERAL	(717) 944-1066
CHESTER	CHARLESTOWN TWP MUN AUTHORITY	(610) 935-2060	DAUPHIN	LOWER PAXTON TWP AUTHORITY	(717) 657-5617
CHESTER	COATESVILLE SEWAGE PLANT AUTHORITY		DAUPHIN	LYKENS BOROUGH AUTHORITY	
CHESTER	DOWNINGTOWN AREA REGIONAL AUTHORITY	(610) 363-2838	DAUPHIN	MILLERSBURG AREA AUTHORITY	(717) 692-4711
CHESTER	EAST CALN TWP, CHESTER CO,		DAUPHIN	ROYALTON BOROUGH AUTHORITY	(717) 944-4831
CHESTER	EAST VINCENT MUNICIPAL AUTHORITY	(610) 933-4424	DAUPHIN	SUSQUEHANNA TWP AUTHORITY	(717) 545-3301
CHESTER	EAST WHITELAND MUNICIPAL AUTHORITY	(610) 648-0600	DAUPHIN	SWATARA TWP AUTHORITY	(717) 564-1650
CHESTER	ELVERSON, THE BOROUGH OF MUNICIPAL	(610) 286-6420	DAUPHIN	WASHINGTON TWP AUTHORITY	(717) 362-3191
CHESTER	LONDON GROVE TWP MUN AUTHORITY	(610) 268-0638	DAUPHIN	WEST HANOVER TWP MUNICIPAL	(717) 652-4841
CHESTER	MALVERN MUNICIPAL AUTHORITY		DAUPHIN	WEST HANOVER TWP SEWER AND	(717) 540-0124
CHESTER	NORTH COVENTRY MUNICIPAL AUTHORITY	(610) 326-1064	DELAWARE	BETHEL TWP, DEL CO, SEWER AUTHORITY	(610) 358-5893
CHESTER	NORTHWSTRN CHESTER CO MUN AUTHORITY	(610) 273-2265	DELAWARE	CENTRAL DELAWARE CO AUTHORITY	(610) 544-9944
CHESTER	OXFORD AREA SEWER AUTHORITY	(610) 932-2500	DELAWARE	CHADDS FORD TP SEWER AUTHORITY	(610) 459-1729
CHESTER	OXFORD MUNICIPAL AUTHORITY	(610) 932-2500	DELAWARE	CHESTER SEWER AUTHORITY SEE DELCO	
CHESTER	PARKESBURG BOROUGH AUTHORITY	(610) 857-2616	DELAWARE	CHESTER TWP SEWER AUTHORITY	(610) 494-4149
CHESTER	SADSBURY TWP MUNICIPAL AUTHORITY	(610) 857-9503	DELAWARE	CONCORD TWP SEWER AUTHORITY	(610) 558-0578
CHESTER	SCHUYLKILL TWP SEWER AUTHORITY		DELAWARE	DARBY CREEK JOINT AUTHORITY	(610) 876-5523
CHESTER	SPRING CITY BOROUGH AUTHORITY	(610) 948-3660	DELAWARE	DELAWARE CO REGIONAL WATER	(610) 876-5523
CHESTER	UPPER UWCHLAN TWP MUN AUTHORITY	(610) 458-9400	DELAWARE	FOLCROFT BOROUGH AUTHORITY	(610) 522-1305
CHESTER	UWCHLAN TWP MUNICIPAL AUTHORITY	(610) 363-6265	DELAWARE	HAVERFORD TWP AUTHORITY	(610) 446-9403
CHESTER	VALLEY FORGE SEWER AUTHORITY	(610) 935-1553	DELAWARE	MEDIA MUNICIPAL AUTHORITY	(610) 566-5210
CHESTER	WALLACE TWP MUNICIPAL AUTHORITY	(610) 942-2880	DELAWARE	MUCKINIPATES AUTHORITY	(610) 876-5523
CHESTER	WEST BRANDYWINE TWP	(610) 380-8200	DELAWARE	RADNOR TWP MUNICIPAL AUTHORITY	
CHESTER	WEST GROVE BOROUGH AUTHORITY	(610) 869-2792	DELAWARE	RADNOR-HAVERFORD-MARPLE SEWER	(610) 446-0867
CHESTER	WILLISTOWN TWP MUNICIPAL AUTHORITY		DELAWARE	SOUTHERN DELAWARE COUNTY AUTHORITY	(610) 485-6789
CLARION	CLARION AREA AUTHORITY	(814) 226-8831	DELAWARE	SOUTHWEST DELAWARE CO MUN AUTHORITY	(610) 494-1336
CLARION	EAST BRADY SEWER AUTHORITY	(724) 526-5531	DELAWARE	TRAINER SEWER AUTHORITY	
CLARION	FOXBURG AREA WATER & SEWER	(724) 659-2002	DELAWARE	UPPER PROVIDENCE TWP SEWER AUTHORITY	(610) 566-5376
CLARION	PAINT ELK JOINT SEWER	(814) 226-6172	ELK	FOX TWP SEWER AUTHORITY	(814) 885-6552
CLARION	REDBANK VALLEY MUNICIPAL AUTHORITY	(814) 226-2585	ELK	JAY TWP AUTHORITY	(814) 787-7233
CLARION	ST PETERSBURG-RICHLAND	(724) 659-2696	ELK	JOHNSONBURG MUNICIPAL AUTHORITY	(814) 965-4218

County	AuthorityName	Phone	County	AuthorityName	Phone
ELK	JONES TWP MUNICIPAL AUTHORITY	(814) 929-5626	LACKAWANNA	ABINGTON TWP MUNICIPAL AUTHORITY	(570) 586-0111
ELK	RIDGWAY MUNICIPAL AUTHORITY, ELK COUNTY	(814) 776-1125	LACKAWANNA	BENTON-NICHOLSON JOINT SEWER AUTHORITY	(570) 563-2661
ELK	RIDGWAY TWP MUNICIPAL AUTHORITY	(814) 776-1003	LACKAWANNA	CLARKS SUMMIT BOROUGH AUTHORITY	
ERIE	ALBION BOROUGH MUNICIPAL AUTHORITY	(814) 756-3660	LACKAWANNA	CLARKS SUMMIT-SOUTH ABINGTON	(570) 587-2830
ERIE	CRANESVILLE SEWER AUTHORITY	(814) 756-4419	LACKAWANNA	COVINGTON TWP SEWER	(570) 842-0757
ERIE	ERIE COUNTY WATER & SEWER	(814) 451-6336	LACKAWANNA	DALTON SEWER AUTHORITY	(570) 563-1354
ERIE	FAIRVIEW TWP SEWER AUTHORITY	(814) 474-2238	LACKAWANNA	DICKSON CITY GENERAL AUTHORITY	(570) 489-4758
ERIE	HARBORCREEK TWP SEWER AUTHORITY	(814) 899-9191	LACKAWANNA	ELMHURST TWP SEWER AUTHORITY	(570) 842-9999
ERIE	MCKEAN TWP SEWER AUTHORITY	(814) 476-7414	LACKAWANNA	FELL TWP SEWER AUTHORITY	(570) 282-0321
ERIE	MIDDLEBORO MUNICIPAL AUTHORITY	(814) 476-7788	LACKAWANNA	GREENFIELD TWP SEWER	(570) 222-4888
ERIE	NORTH EAST BOROUGH SEWER AUTHORITY	(814) 725-8611	LACKAWANNA	JEFFERSON TWP SEWER	(570) 689-7028
ERIE	NORTH EAST TWP SEWER AUTHORITY		LACKAWANNA	LACKAWANNA RIVER BASIN SEWER	(570) 489-7563
ERIE	NORTHWEST ERIE COUNTY REGIONAL		LACKAWANNA	LOWER LACKAWANNA VALLEY	(570) 655-1665
ERIE	SUMMIT TWP SEWER AUTHORITY	(814) 868-4495	LACKAWANNA	MOSCOW SEWER AUTHORITY	(570) 842-6477
ERIE	UNION CITY, BORO OF, MUNICIPAL AUTHORITY	(814) 438-3721	LACKAWANNA	NORTH POCONO JOINT SANITARY	(570) 842-1699
ERIE	WATERFORD, BOROUGH OF, MUN AUTHORITY	(814) 796-4613	LACKAWANNA	ROARING BROOK TWP SEWER AUTHORITY	(570) 842-4218
FAYETTE	BELLE VERNON, BOROUGH OF, MUNICIPAL	(724) 929-8138	LACKAWANNA	SCOTT TWP SEWER AUTHORITY	(570) 254-6969
FAYETTE	BROWNSVILLE MUNICIPAL AUTHORITY	(412) 785-8698	LACKAWANNA	SCRANTON, CITY OF, SEWER AUTHORITY	(570) 348-5330
FAYETTE	BULLSKIN TP-CONNELLSVILLE TP	(724) 628-7630	LACKAWANNA	SOUTH ABINGTON SEWER AUTHORITY	(570) 586-2111
FAYETTE	CONNELLSVILLE MUNICIPAL AUTHORITY	(724) 626-1950	LACKAWANNA	SPRING BROOK TWP SEWER AUTHORITY	(570) 842-7300
FAYETTE	DUNBAR BOR/TP SANITARY AUTHORITY	(724) 277-4949	LACKAWANNA	TAYLOR, BOROUGH OF, MUNICIPAL AUTHORITY	(570) 562-1400
FAYETTE	DUNBAR TWP MUNICIPAL AUTHORITY	(724) 628-1217	LANCASTER	CHRISTIANA BOROUGH AUTHORITY	
FAYETTE	FAIRCHANCE-GEORGES JOINT MUNICIPAL	(724) 564-1010	LANCASTER	EARL TWP SEWER AUTHORITY	(717) 354-0773
FAYETTE	FAYETTE CITY, MUNICIPAL AUTHORITY OF	(724) 326-8793	LANCASTER	EAST COCALICO TWP AUTHORITY	(717) 336-1731
FAYETTE	FAYETTE COUNTY GENERAL AUTHORITY		LANCASTER	EAST EARL SEWER AUTHORITY	(717) 354-5889
FAYETTE	GEORGES CREEK MUNICIPAL AUTHORITY	(724) 437-8824	LANCASTER	EASTERN LANCASTER CO AUTHORITY	(717) 768-8059
FAYETTE	GERMAN TWP MUNICIPAL AUTHORITY	(724) 737-5130	LANCASTER	ELIZABETHTOWN AREA REGIONAL AUTHORITY	(717) 367-1700
FAYETTE	GREATER UNIONTOWN JOINT SEWAGE	(724) 438-5844	LANCASTER	EPHRATA TWP SEWER AUTHORITY	(717) 733-1044
FAYETTE	LUZERNE TWP SEWAGE AUTHORITY	(724) 785-5021	LANCASTER	GEORGETOWN AREA SEWER AUTHORITY	(717) 786-2877
FAYETTE	MALLEN TWP SEWER	(724) 245-7108	LANCASTER	LANCASTER AREA SEWER AUTHORITY	(717) 299-4843
FAYETTE	NEWELL MUNICIPAL AUTHORITY	(724) 785-8698	LANCASTER	LEACOCK TWP SEWER AUTHORITY	(717) 768-8585
FAYETTE	NORTH UNION TWP MUNICIPAL	(724) 437-2731	LANCASTER	LEOLA SEWER AUTHORITY	(717) 656-9755
FAYETTE	PERRY TWP MUNICIPAL AUTHORITY	(724) 736-2334	LANCASTER	MANOR TWP MUNICIPAL AUTHORITY	
FAYETTE	PERRYOPOLIS AREA JOINT AUTHORITY	(724) 736-8330	LANCASTER	MARIETTA-DONEGAL JOINT AUTHORITY	(717) 426-1931
FAYETTE	REDSTONE TWP SEWER AUTHORITY	(724) 437-9923	LANCASTER	MILLERSVILLE MUNICIPAL AUTHORITY	(717) 872-4645
FAYETTE	SOUTH CONNELLSVILLE BOROUGH	(724) 628-4860	LANCASTER	MILLERSVILLE MUNICIPAL AUTHORITY	
FAYETTE	SOUTH CONNELLSVILLE SEWER AUTHORITY		LANCASTER	MOUNT JOY BOROUGH AUTHORITY	(717) 653-5938
FAYETTE	SOUTH UNION TWP SEWAGE AUTHORITY	(412) 785-8698	LANCASTER	MOUNT JOY TWP AUTHORITY	(717) 367-0749
FAYETTE	UNIONTOWN, CITY OF, MUNICIPAL AUTHORITY		LANCASTER	NORTHERN LANCASTER COUNTY AUTHORITY	(717) 445-7553
FAYETTE	YOUGH SANITARY AUTHORITY	(724) 529-7490	LANCASTER	PARADISE TWP SEWER AUTHORITY	(717) 687-7711
FAYETTE	FRANKLIN COUNTY GENERAL AUTHORITY	(717) 267-9532	LANCASTER	QUARRYVILLE BOROUGH AUTHORITY	(717) 786-2404
FAYETTE	GREENE TWP MUNICIPAL AUTHORITY	(717) 263-5324	LANCASTER	SADSBURY TWP SEWER AUTHORITY	(610) 857-2141
FAYETTE	GUILFORD TWP AUTHORITY	(717) 264-7653	LANCASTER	SUBURBAN LANCASTER SEWER AUTHORITY	(717) 291-7411
FAYETTE	HAMILTON TWP MUNICIPAL AUTHORITY	(717) 264-8959	LANCASTER	TERRE HILL AUTHORITY, LANCASTER CO	
FAYETTE	LETTERKENNY TWP MUNICIPAL AUTHORITY	(717) 532-8716	LANCASTER	WARWICK TWP MUNICIPAL AUTHORITY	(717) 627-2379
FAYETTE	LURGAN TWP AUTHORITY FRANKLIN CO	(570) 425-6331	LANCASTER	WEST COCALICO TWP AUTHORITY	(717) 336-8720
FAYETTE	MERCERSBURG, THE SEWER AUTHORITY	(717) 328-3116	LANCASTER	WEST DONEGAL TWP AUTHORITY	(717) 367-5947
FAYETTE	METAL TWP MUNICIPAL AUTHORITY	(717) 349-2257	LANCASTER	WEST EARL SEWER AUTHORITY	(717) 859-3201
FAYETTE	MONT ALTO SEWER AUTHORITY	(717) 749-7141	LAWRENCE	BESSEMER MUNICIPAL AUTHORITY	(724) 667-7061
FAYETTE	PETERS TWP MUN AUTHORITY,FRNKLN CO	(717) 328-3352	LAWRENCE	ELLPORT BOROUGH, LAWRENCE CO,	(724) 552-1422
FAYETTE	SAINT THOMAS TP MUNICIPAL AUTHORITY	(717) 369-5890	LAWRENCE	LAWRENCE HICKORY MUNICIPAL AUTHORITY	(724) 658-0510
FAYETTE	WASHINGTON TWP MUNICIPAL AUTHORITY	(717) 762-3108	LAWRENCE	NESHANNOCK TWP MUNICIPAL AUTHORITY	
FAYETTE	WAYNESBORO BOROUGH AUTHORITY	(717) 762-2101	LAWRENCE	NEW CASTLE SANITATION AUTHORITY	(412) 654-1627
FULTON	BETHEL TWP SEWAGE AUTHORITY	(717) 294-3958	LAWRENCE	NORTH BEAVER TWP	(724) 667-7999
FULTON	HUSTONTOWN, JOINT SEWER AUTHORITY	(717) 485-9051	LAWRENCE	PERRY, TWP OF, MUNICIPAL	(724) 368-8230
FULTON	MCCONNELLSBURG SEWAGE AUTHORITY	(717) 485-4728	LAWRENCE	SHENANGO TWP MUNICIPAL AUTHORITY	(412) 654-7499
GREENE	BLACKSVILLE AREA WATER & SEWER	(724) 435-7347	LAWRENCE	UNION SEWER & DISPOSAL AUTHORITY	(724) 658-5012
GREENE	BRAVE WATER & SEWER AUTHORITY	(724) 451-8330	LAWRENCE	WAYNE TWP MUNICIPAL AUTHORITY	(724) 758-8988
GREENE	CARMICHAELS-CUMBERLAND JOINT	(724) 966-5800	LAWRENCE	WILMINGTON TWP, LAWRENCE	(724) 946-2560
GREENE	CRUCIBLE SEWAGE AUTHORITY		LEBANON	ANNVILLE TWP AUTHORITY	(717) 867-4476
GREENE	DRY TAVERN SEWER AUTHORITY	(412) 883-3695	LEBANON	CLEONA BOROUGH AUTHORITY	(717) 272-7167
GREENE	DUNKARD BOBTOWN MUNICIPAL AUTHORITY	(724) 839-7458	LEBANON	CORNWALL BOROUGH MUNICIPAL AUTHORITY	(717) 274-5441
GREENE	FRANKLIN TWP SEWER AUTHORITY	(412) 627-9728	LEBANON	FREDERICKSBURG SEW & WATER AUTHORITY	(717) 865-4005
GREENE	GREENSBORO MONONGAHELA TWP	(412) 943-3925	LEBANON	LEBANON, CITY OF, AUTHORITY	(717) 273-6732
GREENE	GREENSBORO SEWAGE AUTHORITY	(724) 943-3000	LEBANON	MILLCREEK-RICHLAND JOINT AUTHORITY	(717) 866-5938
GREENE	LOWER TEN MILE JOINT SEWER	(724) 883-2743	LEBANON	MOUNT GRETN A AUTHORITY	(717) 964-3270
GREENE	MOUNT MORRIS WATER & SEWER AUTHORITY	(724) 324-2186	LEBANON	NORTH LEBANON TWP MUN AUTHORITY	(717) 273-7132
GREENE	SOUTH-EAST FRANKLIN AUTHORITY		LEBANON	NORTHERN LEBANON CO AUTHORITY	(717) 865-4651
GREENE	TEEGARDEN HOMES AUTHORITY	(814) 377-0536	LEBANON	PALMYRA BOROUGH AUTHORITY	
GREENE	WEST FRANKLIN SEWER AUTHORITY		LEBANON	SOUTH LEBANON TWP AUTHORITY	(717) 274-0481
HUNTINGDON	ALEXANDRIA BOROUGH PORTER TWP	(814) 669-9309	LEBANON	SOUTH LONDONDERRY TWP MUN AUTHORITY	(717) 838-5556
HUNTINGDON	CASSVILLE WATER & SEWER AUTHORITY	(814) 448-2079	LEBANON	WEST CORNWALL TWP	(717) 274-3644
HUNTINGDON	CROMWELL TWP MUNICIPAL	(814) 447-3133	LEHIGH	ALLENTOWN AUTHORITY	(610) 437-7521
HUNTINGDON	HUNTINGDON WATER & SEWER AUTHORITY	(814) 643-3966	LEHIGH	COPLAY MUNICIPAL AUTHORITY	
HUNTINGDON	MAPLETON AREA JOINT MUNICIPAL	(814) 542-4597	LEHIGH	COPLAY-WHITEHALL, SEWER AUTHORITY	(610) 437-4461
HUNTINGDON	MARKLESBURG AUTHORITY	(814) 658-3591	LEHIGH	FOUNTAIN HILL AUTHORITY	
HUNTINGDON	MILL CREEK AREA MUNICIPAL AUTHORITY	(814) 643-5666	LEHIGH	LEHIGH COUNTY AUTHORITY	(610) 398-2503
HUNTINGDON	ORBISONIA-ROCKHILL JOINT MUN AUTHORITY	(814) 447-5414	LEHIGH	LOWER MACUNGIE TWP AUTHORITY	
HUNTINGDON	SHADE GAP AREA JOINT MUNICIPAL	(814) 643-3820	LEHIGH	LYNN TWP SEWER AUTHORITY	(610) 298-8651
HUNTINGDON	SHIRLEY TWP GENERAL AUTHORITY	(814) 542-9732	LEHIGH	MACUNGIE BOROUGH SEWER AUTHORITY	(610) 966-2503
HUNTINGDON	SMITHFIELD TWP SEWAGE AUTHORITY		LEHIGH	NORTH WHITEHALL TWP AUTHORITY	(610) 799-3411
HUNTINGDON	SPRING CREEK JOINT SEWER AUTHORITY	(814) 448-3414	LEHIGH	SALISBURY TWP AUTHORITY	(610) 797-4000
HUNTINGDON	WALKER TWP MUNICIPAL AUTHORITY	(717) 627-1890	LEHIGH	SOUTH WHITEHALL TWP AUTHORITY	(610) 398-0401
HUNTINGDON	WOOD TWP AUTHORITY		LEHIGH	UPPER MACUNGIE TWP AUTHORITY	(610) 398-9171
HUNTINGDON	WOODCOCK VALLEY MUNICIPAL AUTHORITY		LEHIGH	UPPER SAUCON TWP MUNICIPAL AUTHORITY	(610) 282-1171
INDIANA	BLAIRSVILLE MUNICIPAL AUTHORITY		LEHIGH	WASHINGTON TWP WATER & SEWER AUTHORITY	(610) 767-8108
INDIANA	BLAIRSVILLE MUNICIPAL AUTHORITY	(412) 459-9100	LUZERNE	AVOCA BOROUGH MUNICIPAL AUTHORITY	
INDIANA	BURRELL TWP SEWER AUTHORITY	(412) 248-7272	LUZERNE	BUTLER TWP AUTHORITY	(570) 788-4425
INDIANA	CANOE TWP MUNICIPAL AUTHORITY	(814) 938-8203	LUZERNE	CONYNGHAM BOROUGH AUTHORITY	(570) 788-4442
INDIANA	CENTER TWP, INDIANA CO,		LUZERNE	CONYNGHAM TWP SEWER AUTHORITY	(570) 542-2411
INDIANA	CENTRAL INDIANA COUNTY JOINT	(724) 479-3151	LUZERNE	DALLAS AREA MUNICIPAL AUTHORITY	(570) 696-1133
INDIANA	CLYMER BOROUGH MUNICIPAL AUTHORITY	(724) 254-9884	LUZERNE	DUPONT BOROUGH SEWER AUTHORITY	(570) 655-6216
INDIANA	CONEMAUGH TWP MUNICIPAL	(724) 639-9330	LUZERNE	DURYEA BOROUGH SEWER AUTHORITY	(570) 457-0122
INDIANA	GREEN TWP MUNICIPAL AUTHORITY	(724) 254-1343	LUZERNE	FOSTER, TWP OF, MUNICIPAL AUTHORITY	(570) 636-3757
INDIANA	INDIANA CO MUNICIPAL SERVICES AUTHORITY	(412) 349-6640	LUZERNE	FREELAND, BORO OF, MUNICIPAL AUTHORITY	(570) 636-1733
JEFFERSON	BIG RUN AREA MUNICIPAL AUTHORITY	(814) 427-2102	LUZERNE	GREATER HAZLETON JOINT SEWER AUTHORITY	(570) 454-0851
JEFFERSON	BROOKVILLE MUNICIPAL AUTHORITY	(814) 849-5320	LUZERNE	HANOVER, TWP OF, MUNICIPAL AUTHORITY	
JEFFERSON	FALLS CREEK BOROUGH MUNICIPAL AUTHORITY	(814) 371-2121	LUZERNE	HARVEYS LAKE BORO GEN MUN AUTHORITY	(570) 639-1042
JEFFERSON	HENDERSON TWP MUNICIPAL AUTHORITY	(814) 427-2755	LUZERNE	HAZLE TWP MUNICIPAL AUTHORITY	(570) 459-5921
JEFFERSON	REYNOLDSVILLE SEWAGE AUTHORITY	(814) 653-8245	LUZERNE	JACKSON TWP GENERAL	(570) 655-3329
JEFFERSON	SNYDER TWP MUNICIPAL AUTHORITY	(814) 265-0451	LUZERNE	JENKINS TWP SANITARY AUTHORITY	(570) 654-3315
JEFFERSON	SYKESVILLE SEWAGE AUTHORITY	(814) 894-2406	LUZERNE	LAFLIN BOROUGH SANITARY AUTHORITY	(570) 654-3323
JEFFERSON	FERMANAGH TWP SEWER	(717) 436-8870	LUZERNE	LARKSVILLE, BOROUGH OF, SEWER	(570) 714-9853
JUNIATA	JUNIATA CO MUNICIPAL AUTHORITY		LUZERNE	LATTIMER SEWER AUTHORITY	
JUNIATA	MCALISTERSVILLE AREA JOINT AUTHORITY	(717) 463-3434	LUZERNE	LEHMAN TWP MUNICIPAL	(570) 675-6924
JUNIATA	THOMPOSTOWN MUNICIPAL AUTHORITY	(717) 535-5292	LUZERNE	MEADVILLE AREA SEWER AUTHORITY	(814) 724-6000
JUNIATA	TWIN BOROUGHS SANITARY AUTHORITY	(717) 436-8380	LUZERNE	MOUNTAIN TOP AREA JOINT	(570) 678-7411

County	AuthorityName	Phone	County	AuthorityName	Phone
LUZERNE	NESCOPECK BOROUGH AUTHORITY	(570) 752-6008	NORTHAMPTON	ALLEN TWP AUTHORITY	(610) 262-4816
LUZERNE	NEWPORT TWP SEWER AUTHORITY	(570) 735-2000	NORTHAMPTON	BANGOR BOROUGH AUTHORITY	(610) 588-2089
LUZERNE	PITTSFORD, TWP OF, SEWER	(570) 655-8747	NORTHAMPTON	BATH BOROUGH AUTHORITY	(610) 837-0652
LUZERNE	PLAINS, TWP OF, SEWER AUTHORITY	(570) 824-1902	NORTHAMPTON	BUSHKILL LOWER LEHIGH JOINT	
LUZERNE	PLYMOUTH TWP SANITARY AUTHORITY		NORTHAMPTON	EAST ALLEN TWP MUNICIPAL AUTHORITY	(610) 262-3021
LUZERNE	PRINGLE BOROUGH SEWER AUTHORITY	(570) 288-2339	NORTHAMPTON	EAST BANGOR MUNICIPAL AUTHORITY	(610) 588-3026
LUZERNE	RACON CREEK MUNICIPAL	(570) 384-3206	NORTHAMPTON	EASTON AREA JOINT SEWER AUTHORITY	(610) 250-6707
LUZERNE	ROSS TWP SANITARY AUTHORITY	(570) 477-2971	NORTHAMPTON	EASTON, CITY OF, AUTHORITY	
LUZERNE	SHICKSHINNY BORO SANITARY SEW AUTHORITY	(570) 542-2561	NORTHAMPTON	FREEMANSBURG MUNICIPAL AUTHORITY	(610) 868-2401
LUZERNE	SWOYERSVILLE MUNICIPAL AUTHORITY		NORTHAMPTON	HANOVER TWP. NORTHMPN CO. AUTHORITY	
LUZERNE	VALLEY JOINT AUTHORITY	(570) 788-4385	NORTHAMPTON	HELLERTOWN BOROUGH AUTHORITY	(610) 838-8051
LUZERNE	WARRIOR RUN SEWER AUTHORITY	(570) 822-1012	NORTHAMPTON	LEHIGH TWP MUNICIPAL AUTHORITY	(610) 767-6771
LUZERNE	WHITE HAVEN MUNICIPAL AUTHORITY	(570) 443-7099	NORTHAMPTON	LEHIGH TWP WATER & SEWER	
LUZERNE	WYOMING BOROUGH SEWER AUTHORITY	(570) 693-0291	NORTHAMPTON	LOWER SALUCON AUTHORITY	(610) 317-3212
LUZERNE	WYOMING VALLEY SANITARY AUTHORITY	(570) 825-3416	NORTHAMPTON	LOWER SALUCON TWP AUTHORITY	
LYCOMING	CLINTON TWP WATER & SEWER	(570) 547-1466	NORTHAMPTON	NAZARETH BOROUGH MUNICIPAL AUTHORITY	(610) 759-0727
LYCOMING	HUGHESVILLE WOLF TWP	(570) 584-4024	NORTHAMPTON	NORTH CATAAQUA AUTHORITY	
LYCOMING	JERSEY SHORE SANITARY AUTHORITY		NORTHAMPTON	PEN ARGYL MUNICIPAL AUTHORITY	(610) 863-4119
LYCOMING	LOYALSOCK TWP AUTHORITY	(570) 322-5297	NORTHAMPTON	ROSETO BOROUGH SEWER AUTHORITY	(610) 588-0882
LYCOMING	LYCOMING CO WATER AND SEWER	(570) 546-8005	NORTHAMPTON	TATAMY BOROUGH SEWER AUTHORITY	(610) 252-7123
LYCOMING	MONTGOMERY WATER & SEWER AUTHORITY	(570) 547-1671	NORTHAMPTON	WALNUTPORT AUTHORITY	(610) 767-7887
LYCOMING	MUNCY BOROUGH MUNICIPAL AUTHORITY	(570) 546-3952	NORTHAMPTON	WEST EASTON SEWER AUTHORITY	(610) 252-6112
LYCOMING	MUNCY CREEK TP SEWER AUTHORITY	(570) 546-6067	NORTHAMPTON	WIND GAP MUNICIPAL AUTHORITY	(610) 863-7770
LYCOMING	PORTER TWP SEWER AUTHORITY		NORTHUMBERLAND	DELAWARE TWP MUNICIPAL AUTHORITY	(570) 538-1186
LYCOMING	PORTER TWP SEWER AUTHORITY	(570) 398-4526	NORTHUMBERLAND	HERNDON MUNICIPAL AUTHORITY	(570) 758-3264
LYCOMING	SOUTH WILLIAMSPORT SEWAGE AUTHORITY		NORTHUMBERLAND	KULPMONT MARION HEIGHTS JOINT	(570) 373-1590
LYCOMING	WILLIAMSPORT SANITARY AUTHORITY	(570) 323-6140	NORTHUMBERLAND	MCEWENSVILLE MUNICIPAL AUTHORITY	(570) 538-1386
MCKEAN	BRADFORD SANITARY AUTHORITY	(814) 362-3884	NORTHUMBERLAND	MOUNT CARMEL MUNICIPAL AUTHORITY	(570) 339-5166
MCKEAN	ELDRD, BOROUGH OF, MUNICIPAL AUTHORITY	(814) 225-4777	NORTHUMBERLAND	MUNICIPAL AUTHORITY OF RALPHO TWP	(570) 672-9792
MCKEAN	FOSTER TWP AUTHORITY	(814) 362-4656	NORTHUMBERLAND	NORTHUMBERLAND SEWER AUTHORITY	(570) 473-1992
MCKEAN	KANE, BOROUGH OF, AUTHORITY	(814) 837-9240	NORTHUMBERLAND	POINT TWP SEWER AUTHORITY	(570) 743-3198
MCKEAN	LAFAYETTE TWP SEWER AUTHORITY	(814) 368-5030	NORTHUMBERLAND	RIVERSIDE MUNICIPAL AUTHORITY	
MCKEAN	LEWIS RUN BOROUGH SEWER AUTHORITY	(814) 368-6350	NORTHUMBERLAND	SHAMOKIN, TWP OF	(570) 672-9891
MCKEAN	MCKEAN CO SEWER & WATER AUTHORITY	(814) 887-5563	NORTHUMBERLAND	SHAMOKIN-COAL TWP JOINT SEWER AUTHORITY	(570) 648-1262
MCKEAN	MOUNT JEWETT REGIONAL SEWER	(814) 778-5701	NORTHUMBERLAND	SUNBURY, CITY OF, MUNICIPAL AUTHORITY	(570) 286-5858
MCKEAN	OTTO TWP MUNICIPAL AUTHORITY	(814) 966-3278	NORTHUMBERLAND	SUNNYSIDE/OVERLOOK MUNICIPAL AUTHORITY	(570) 672-9236
MCKEAN	OTTO TWP SANITARY AUTHORITY	(814) 966-3278	NORTHUMBERLAND	TURBOT TWP MUNICIPAL AUTHORITY	(570) 742-3832
MERCER	CLARK, BOROUGH OF, SEWER AUTHORITY	(724) 962-5821	NORTHUMBERLAND	TURBOTVILLE, BORO OF, MUNICIPAL AUTHORITY	(570) 649-5476
MERCER	COOLSPRING JACKSON LAKE	(724) 662-2937	NORTHUMBERLAND	UPPER AUGUSTA, TWP OF	(570) 286-6809
MERCER	EAST LACKAWANNOCK TWP SEWER	(724) 533-5171	NORTHUMBERLAND	WATSONTOWN SEWER AUTHORITY	
MERCER	HEMPFIELD TWP MUNICIPAL AUTHORITY	(412) 588-5032	NORTHUMBERLAND	ZERBE TWP MUNICIPAL AUTHORITY	(570) 797-1974
MERCER	LAKEVIEW JOINT SEWER AUTHORITY	(724) 376-3273	PERRY	BLOOMFIELD MUNICIPAL AUTHORITY	(717) 582-2825
MERCER	MERCER BOROUGH SEWAGE TREATMENT	(724) 662-3980	PERRY	ICKESBURG VILLAGE MUNICIPAL	(717) 438-3208
MERCER	SHARON, CITY OF, SANITARY AUTHORITY	(724) 983-3220	PERRY	LANDISBURG MUNICIPAL AUTHORITY	(717) 789-3624
MERCER	SHENANGO TWP MUNICIPAL AUTHORITY	(412) 528-1577	PERRY	LIVERPOOL MUNICIPAL AUTHORITY	(717) 444-3521
MERCER	SOUTH PYMATUNING TWP MUN AUTHORITY	(724) 962-7856	PERRY	LOYSVILLE VILLAGE MUNICIPAL AUTHORITY	(717) 789-3854
MERCER	UPPER SHENANGO VALLEY WATER	(724) 346-6765	PERRY	MARYSVILLE BOROUGH AUTHORITY	(717) 957-3110
MERCER	WEST SALEM TWP MUNICIPAL	(724) 588-2082	PERRY	OLIVER TWP MUNICIPAL	(717) 567-3809
MIFFLIN	ARMAGH TWP AUTHORITY	(717) 667-6260	PERRY	PENN TWP MUNICIPAL AUTHORITY OF PERRY CO	(717) 834-5281
MIFFLIN	GRANVILLE TWP MUNICIPAL AUTHORITY	(717) 242-1838	PIKE	LACKAWAXEN SEWER & DISPOSAL	(570) 685-7288
MIFFLIN	KISTLER MUNICIPAL AUTHORITY	(570) 542-8615	PIKE	WESTFALL, MUNICIPAL AUTHORITY OF TP OF	(570) 491-4065
MIFFLIN	UNION TWP MUNICIPAL AUTHORITY	(717) 935-2890	POTTER	AUSTIN BOROUGH AUTHORITY	(814) 647-8450
MIFFLIN	WEST WAYNE SEWER AUTHORITY	(814) 542-4781	POTTER	COUDERSPORT AREA MUNICIPAL AUTHORITY	(814) 274-9776
MONROE	BARRETT TWP MUNICIPAL AUTHORITY	(570) 595-2602	POTTER	SINGLEHOUSE BOROUGH AUTHORITY	(814) 697-6711
MONROE	DELAWARE WATER GAP MUNICIPAL AUTHORITY	(570) 476-0331	POTTER	ULYSSES MUNICIPAL AUTHORITY	(814) 848-7551
MONROE	EAST STROUDSBURG BOROUGH AUTHORITY	(570) 421-8300	SCHUYLKILL	ASHLAND MUNICIPAL AUTHORITY	(570) 875-2411
MONROE	MIDDLE SMITHFIELD TWP	(570) 223-8920	SCHUYLKILL	BRANCH TWP, MUNICIPAL	(570) 544-3183
MONROE	MOUNT POCONO MUNICIPAL AUTHORITY	(570) 839-8963	SCHUYLKILL	BUTLER TWP MUNICIPAL AUTHORITY	(570) 875-0253
MONROE	SMITHFIELD SEWER AUTHORITY	(570) 421-6931	SCHUYLKILL	CRESSONA BOROUGH AUTHORITY	(570) 385-1155
MONROE	SOUTHEASTERN MONROE SEWER AUTHORITY	(570) 421-3362	SCHUYLKILL	DEER LAKE, BORO OF, MUNICIPAL AUTHORITY	(570) 366-1358
MONROE	STROUD TWP SEWER AUTHORITY	(570) 421-5043	SCHUYLKILL	EAST UNION TWP SEWER AUTHORITY	(570) 384-4964
MONROE	TOBYHANNA TWP SEWER	(570) 646-1212	SCHUYLKILL	FRACKVILLE AREA MUNICIPAL AUTHORITY	(570) 874-2040
MONTGOMERY	ABINGTON TWP SEWER AUTHORITY		SCHUYLKILL	GILBERTON BOROUGH OF, SEWER AUTHORITY	(570) 874-4459
MONTGOMERY	BRIDGEPORT BOROUGH AUTHORITY	(610) 272-1811	SCHUYLKILL	GIRARDVILLE AREA MUNICIPAL AUTHORITY	(570) 276-1635
MONTGOMERY	BRYN ATHYN BOROUGH AUTHORITY	(610) 275-0700	SCHUYLKILL	GORDON MUNICIPAL AUTHORITY	(570) 875-0873
MONTGOMERY	COLLEGEVILLE-TRAPPE MUNICIPAL AUTHORITY	(610) 489-2831	SCHUYLKILL	GREATER POTTSVILLE AREA SEWER	(570) 622-0513
MONTGOMERY	CONSHOHOCKEN, BOROUGH OF, AUTHORITY	(610) 828-0979	SCHUYLKILL	LAKE WYNONAH MUNICIPAL AUTHORITY	(570) 385-4180
MONTGOMERY	EAST NORRITON TWP MUNICIPAL AUTHORITY		SCHUYLKILL	MAHANAO CITY SEWER AUTHORITY	(570) 773-2518
MONTGOMERY	EAST NORRITON-PLYMOUTH-WHITEPAN	(610) 279-5759	SCHUYLKILL	MCADOO BOROUGH SEWER AUTHORITY	(570) 929-1182
MONTGOMERY	FRANCONIA SEWER AUTHORITY	(215) 723-1137	SCHUYLKILL	MCADOO KLINE SEWER AUTHORITY	(570) 929-1182
MONTGOMERY	GREEN LANE-MARLBOROUGH JOINT AUTHORITY	(215) 234-4180	SCHUYLKILL	MECHANICSVILLE SEWER AUTHORITY	
MONTGOMERY	HATFIELD BOROUGH AUTHORITY		SCHUYLKILL	MIDDLEPORT BOROUGH SEWER AUTHORITY	
MONTGOMERY	HATFIELD TWP MUNICIPAL AUTHORITY	(215) 822-9300	SCHUYLKILL	MOUNT CARBON SEWER AUTHORITY	(570) 622-0819
MONTGOMERY	HORSHAM WATER AND SEWER AUTHORITY	(215) 672-8011	SCHUYLKILL	NEW RINGOLD BOROUGH AUTHORITY	(570) 943-3333
MONTGOMERY	LANSDALE SEWER AUTHORITY	(215) 368-1691	SCHUYLKILL	NORTH MANHEIM TWP AUTHORITY	(570) 385-3608
MONTGOMERY	LIMERICK TWP MUNICIPAL AUTHORITY	(610) 948-1033	SCHUYLKILL	NORTH SCHUYL CO WASTE WATER AUTHORITY	
MONTGOMERY	LOWER FREDERICK TWP AUTHORITY	(610) 287-8857	SCHUYLKILL	NORTHEASTERN SCHUYLKILL JOINT	(570) 668-4336
MONTGOMERY	LOWER PERKIOMEN VALLEY	(610) 489-4034	SCHUYLKILL	NORWEGIAN TWP SEWER AUTHORITY	(570) 622-8638
MONTGOMERY	LOWER POTTSBORO AUTHORITY	(610) 323-0436	SCHUYLKILL	PINE GROVE JOINT TREATMENT	(570) 345-3555
MONTGOMERY	LOWER PROVIDENCE TWP SEWER AUTHORITY	(610) 539-6161	SCHUYLKILL	PINE GROVE TWP AUTHORITY	(570) 345-6433
MONTGOMERY	LOWER SALFORD TWP AUTHORITY	(215) 256-8676	SCHUYLKILL	PORT CARBON MUNICIPAL AUTHORITY	
MONTGOMERY	MONTGOMERY COUNTY SEWER AUTHORITY	(610) 539-4246	SCHUYLKILL	PORTER-TOWER JOINT MUNICIPAL AUTHORITY	(717) 647-2479
MONTGOMERY	MONTGOMERY TWP MUN SEWER AUTHORITY	(215) 393-6930	SCHUYLKILL	RINGTOWN, BORO OF, MUNICIPAL AUTHORITY	(570) 889-3095
MONTGOMERY	NEW HANOVER TWP AUTHORITY	(610) 326-6203	SCHUYLKILL	RUSH RYAN DELANO JOINT SEWER AUTHORITY	(570) 668-2938
MONTGOMERY	NORRISTOWN MUNICIPAL WASTE	(610) 270-3190	SCHUYLKILL	RUSH TWP SEWER AUTHORITY	
MONTGOMERY	NORTH PENN AREA MUNICIPAL	(215) 368-1691	SCHUYLKILL	RUSH-RYAN JOINT SEWER AUTHORITY	(570) 668-2938
MONTGOMERY	ROCKLEDGE MUNICIPAL AUTHORITY	(215) 379-8572	SCHUYLKILL	SAINT CLAIR SEWER AUTHORITY	(570) 429-1512
MONTGOMERY	ROYERSFORD BOROUGH AUTHORITY		SCHUYLKILL	SCHUYLKILL HAVEN MUNICIPAL AUTHORITY	(570) 385-2841
MONTGOMERY	SCHWENKSVILLE BOROUGH AUTHORITY		SCHUYLKILL	SCHUYLKILL TWP AUTHORITY	
MONTGOMERY	SPRINGFIELD TWP AUTHORITY	(215) 287-7772	SCHUYLKILL	SCHUYLKILL VALLEY SEWER AUTHORITY	(610) 939-6235
MONTGOMERY	TELFORD BOROUGH AUTHORITY	(215) 836-7600	SCHUYLKILL	TREMONT MUNICIPAL AUTHORITY	(570) 695-3213
MONTGOMERY	UPPER DUBLIN TWP AUTHORITY	(215) 723-5000	SCHUYLKILL	WAYNE TWP MUNICIPAL AUTHORITY	(570) 379-2629
MONTGOMERY	UPPER GWYNEDD TWP AUTHORITY		SCHUYLKILL	WEST MAHANAO TWP SEWER AUTHORITY	
MONTGOMERY	UPPER GWYNEDD-TOWAMENCIN	(215) 855-8165	SNYDER	BEAVER SPRINGS MUNICIPAL AUTHORITY	(570) 658-8211
MONTGOMERY	UPPER HANOVER AUTHORITY	(215) 679-3129	SNYDER	BEAVERTOWN MUNICIPAL AUTHORITY	(570) 658-6715
MONTGOMERY	UPPER MERION MUNICIPAL UTILITY	(610) 265-2600	SNYDER	EASTERN SNYDER COUNTY REGIONAL	(570) 374-1173
MONTGOMERY	UPPER MONTGOMERY JOINT AUTHORITY	(215) 679-5133	SNYDER	HUMMELS WHARF MUNICIPAL AUTHORITY	(570) 743-1284
MONTGOMERY	UPPER MORELAND-HATBORO JOINT	(215) 659-3975	SNYDER	KREAMER MUNICIPAL AUTHORITY	(570) 374-7765
MONTGOMERY	UPPER POTTSBORO MUNICIPAL AUTHORITY		SNYDER	MCCLURE MUNICIPAL AUTHORITY	(570) 658-4755
MONTGOMERY	WEST CONSHOHOCKEN MUNICIPAL AUTHORITY	(610) 825-6552	SNYDER	MIDDLEBURG MUNICIPAL AUTHORITY	(570) 837-2533
MONTGOMERY	WEST NORRITON TWP MUNICIPAL AUTHORITY	(610) 539-1773	SNYDER	PENN TWP MUNICIPAL AUTHORITY	(570) 374-8256
MONTGOMERY	WHITEMARSH TWP AUTHORITY	(610) 825-3535	SNYDER	PENNS CREEK MUNICIPAL AUTHORITY	(570) 837-3185
MONTGOMERY	WHITPAIN TWP SEWER AUTHORITY		SNYDER	PERRY TWP MUNICIPAL AUTHORITY	(570) 539-2195
MONTOUR	COOPER TWP MUNICIPAL	(570) 275-3768	SNYDER	SHAMOKIN DAM WATER & SEWER	
MONTOUR	MAHONING TWP AUTHORITY	(570) 275-1132	SNYDER	UNION-CHAPMAN REGIONAL AUTHORITY	(570) 374-1919
MONTOUR	VALLEY TWP MUNICIPAL AUTHORITY	(570) 275-8559	SOMERSET	BLACK TWP MUNICIPAL AUTHORITY	(814) 926-2325
MONTOUR	WASHINGTONVILLE MUNICIPAL AUTHORITY	(570) 437-2071	SOMERSET	CONEMAUGH TWP AREA SEWER AUTHORITY	(814) 479-7651

County	AuthorityName	Phone	County	AuthorityName	Phone
SOMERSET	CONFLUENCE BOROUGH MUNICIPAL AUTHORITY	(814) 395-5512	WESTMORELAND	MANOR BOROUGH AUTHORITY	
SOMERSET	GARRETT BOROUGH MUNICIPAL AUTHORITY	(814) 634-8147	WESTMORELAND	MON VALLEY SEWAGE AUTHORITY	(412) 379-4141
SOMERSET	JENNER AREA SEWER AUTHORITY	(814) 629-6261	WESTMORELAND	MONESSEN, CITY OF, MUNICIPAL AUTHORITY	
SOMERSET	MILFORD TWP MUNICIPAL AUTHORITY	(814) 445-4371	WESTMORELAND	MOUNT PLEASANT TWP MUNICIPAL AUTHORITY	(724) 423-6263
SOMERSET	PAINT TWP WATER & SEWER AUTHORITY	(814) 467-9788	WESTMORELAND	NEW FLORENCE BORO SEWAGE AUTHORITY	(724) 235-2812
SOMERSET	SEVEN SPRINGS, BOR OF MUN AUTHORITY	(814) 352-7777	WESTMORELAND	NEW KENSINGTON, CITY OF, MUNICIPAL	(724) 335-9813
SOMERSET	SHADE-CENTRAL CITY JOINT AUTHORITY	(814) 754-4195	WESTMORELAND	NORTH HUNTINGDON TWP MUN AUTHORITY	(724) 863-2860
SOMERSET	SOMERSET TWP MUNICIPAL AUTHORITY	(814) 445-5842	WESTMORELAND	NORTH IRWIN BOROUGH MUNICIPAL AUTHORITY	(724) 864-5057
SOMERSET	SOUTHEASTERN SOMERSET COUNTY	(814) 662-2851	WESTMORELAND	PENN TWP SEWAGE AUTHORITY	(724) 744-4333
SOMERSET	STONYCREEK VALLEY SEWER AUTHORITY	(814) 267-3212	WESTMORELAND	ROSTRAVER TWP SEWAGE AUTHORITY	(724) 930-9667
SOMERSET	UPPER STONYCREEK JOINT MUN AUTHORITY	(814) 798-4733	WESTMORELAND	SEWARD-ST CLAIR SANITARY AUTHORITY	(814) 446-5211
SOMERSET	WINDBER AREA AUTHORITY	(814) 467-5574	WESTMORELAND	SEWICKLEY TWP MUNICIPAL AUTHORITY	
SULLIVAN	DUSHORE SEWER AUTHORITY	(570) 928-8020	WESTMORELAND	SEWICKLEY, MUNICIPAL SEWAGE	(724) 446-7202
SULLIVAN	EAGLES MERE BOROUGH AUTHORITY	(570) 525-3247	WESTMORELAND	SMITHTON, BORO OF, MUNICIPAL AUTHORITY	(724) 872-6289
SUSQUEHANNA	BRIDGEWATER TWP MUNICIPAL AUTHORITY	(570) 278-7160	WESTMORELAND	TRAFFORD, BORO OF, MUNICIPAL AUTHORITY	
SUSQUEHANNA	HALLSTEAD GREAT BEND JOINT SEWER	(570) 879-2994	WESTMORELAND	TRI-COMMUNITY WATER &	(724) 676-5631
SUSQUEHANNA	MONTRORSE MUNICIPAL AUTHORITY	(570) 278-2618	WESTMORELAND	UNITY TWP MUNICIPAL AUTHORITY	(724) 539-2549
SUSQUEHANNA	SILVER LAKE TWP MUNICIPAL AUTHORITY	(570) 967-2674	WESTMORELAND	WESTERN WESTMORELAND MUN AUTHORITY	(724) 864-0452
SUSQUEHANNA	TRI BOROUGH MUNICIPAL AUTHORITY	(570) 853-4719	WESTMORELAND	WESTMORELAND-FAYETTE MUNICIPAL	(412) 887-8801
SUSQUEHANNA	BLOSSBURG MUNICIPAL AUTHORITY	(570) 638-2452	WYOMING	FACTORYVILLE SEWER AUTHORITY	(570) 945-7484
TIOGA	CHARLESTON TWP MUNICIPAL AUTHORITY	(570) 724-2241	WYOMING	LACEYVILLE BOROUGH JOINT MUN AUTHORITY	(570) 833-3711
TIOGA	CLYMER TWP MUNICIPAL	(814) 628-2019	WYOMING	LAKE WINOLA MUNICIPAL AUTHORITY	(570) 378-3744
TIOGA	DELMAR TWP MUNICIPAL	(570) 724-5482	WYOMING	TUNKHANNOCK BORO MUNICIPAL AUTHORITY	(570) 836-3493
TIOGA	LAWRENCE TWP MUNICIPAL	(570) 827-0970	WYOMING	WESTGATE WATER & SEWER MUNICIPAL AUT	(570) 836-1199
TIOGA	LAWRENCEVILLE BOROUGH WATER &	(570) 827-3259	YORK	ABBOTTSTOWN PARADISE JOINT	(717) 259-9120
TIOGA	NELSON TWP AUTHORITY	(570) 827-3206	YORK	CARROLL TWP MUNICIPAL	(717) 432-0752
TIOGA	PUTNAM TWP MUNICIPAL AUTHORITY	(570) 659-5528	YORK	CONEWAGO TWP SEWER AUTHORITY	(717) 266-2122
TIOGA	RICHMOND TWP MUNICIPAL AUTHORITY	(570) 662-3774	YORK	DALLASTOWN SEWER AUTHORITY	(717) 244-6626
TIOGA	WESTFIELD BOROUGH AUTHORITY		YORK	DILLSBURG BOROUGH AUTHORITY	(717) 432-9969
UNION	BUFFALO TWP MUNICIPAL	(570) 524-2829	YORK	DOVER BOROUGH MUNICIPAL AUTHORITY	
UNION	EAST BUFFALO TWP		YORK	EAST MANCHESTER TWP MUNICIPAL AUTHORITY	
UNION	GREGG, TWP OF, MUNICIPAL AUTHORITY	(570) 538-3313	YORK	EAST PROSPECT BOROUGH AUTHORITY	(717) 252-0177
UNION	HARTLETON BOROUGH MUNICIPAL	(570) 922-1320	YORK	EASTERN YORK COUNTY SEWER AUTHORITY	(717) 252-2797
UNION	HARTLEY TWP MUNICIPAL AUTHORITY	(570) 922-4120	YORK	GLEN ROCK SEWER AUTHORITY	(717) 235-2082
UNION	KELLY TWP MUNICIPAL AUTHORITY	(570) 523-3843	YORK	HANOVER BOROUGH, YORK CO, AUTHORITY	
UNION	LEWIS, TP OF, MUNICIPAL AUTHORITY	(570) 922-4489	YORK	JACKSON TWP SEWER AUTHORITY	(717) 225-5661
UNION	LEWISBURG AREA JOINT SEWER AUTHORITY	(570) 524-7069	YORK	JACOBUS BOROUGH SEWER AUTHORITY	(717) 428-1634
UNION	LEWISBURG MUNICIPAL AUTHORITY		YORK	LEWISBERRY AREA JOINT AUTHORITY	(717) 938-3596
UNION	NEW BERLIN MUNICIPAL AUTHORITY	(570) 966-2817	YORK	MANCHESTER-MT WOLF SEWER AUTHORITY	
UNION	WEST BUFFALO TP MUNICIPAL AUTHORITY	(570) 966-2779	YORK	NEWBERRY TWP MUNICIPAL	(717) 938-0836
UNION	WHITE DEER TWP SEWER AUTHORITY	(570) 568-3493	YORK	NORTHEASTERN YORK CO SEWER	(717) 846-7000
VENANGO	CLINTONVILLE BOROUGH SEWER	(814) 385-6527	YORK	NORTHERN YORK COUNTY REGIONAL	(717) 787-3792
VENANGO	COOPERSTOWN MUNICIPAL AUTHORITY	(814) 374-4515	YORK	RAILROAD BOROUGH SEWER AUTHORITY	(717) 235-5042
VENANGO	CORNPLANTER VENANGO COUNTY	(814) 676-1744	YORK	SHREWSBURY TWP SEWER	(717) 235-3011
VENANGO	EMLENTON AREA MUNICIPAL AUTHORITY	(814) 797-2482	YORK	SHREWSBURY TWP SEWER &	
VENANGO	FRANKLIN, CITY OF, GEN AUTHORITY	(814) 437-1485	YORK	SOUTH CENTRAL YORK COUNTY	
VENANGO	ROUSEVILLE BOROUGH AUTHORITY	(814) 677-3056	YORK	SPRING GROVE BOROUGH AUTHORITY	(717) 225-5791
VENANGO	SUGARCREEK TWP SEWER AUTHORITY		YORK	SPRINGFIELD TP, YORK CO SEWER	(717) 428-1413
VENANGO	UNIONTOWN HEIGHTS MUNICIPAL	(814) 432-2220	YORK	STEWARTSTOWN BOROUGH	(717) 993-2963
WARREN	BROKENSTRAW VALLEY AREA	(814) 563-7681	YORK	WELLSVILLE, BOROUGH OF, MUNICIPAL	(717) 432-3395
WARREN	CLARENDON MUNICIPAL AUTHORITY		YORK	WEST MANHEIM YORK COUNTY	(717) 632-0320
WARREN	COLUMBUS TWP GENERAL	(814) 664-2711	YORK	WINDSOR BOROUGH AUTHORITY	(717) 244-6615
WARREN	KINZUA WARREN COUNTY JOINT AUTHORITY	(814) 723-2385	YORK	WRIGHTSVILLE BOROUGH MUN AUTHORITY	(717) 252-2768
WARREN	SOUTHWEST WARREN CO MUN AUTHORITY	(814) 484-7424	YORK	YOE BOROUGH SEWER AUTHORITY	(717) 244-8339
WARREN	SUGAR GROVE MUNICIPAL AUTHORITY	(814) 489-7811	YORK	YORK HAVEN SEWER AUTHORITY	(717) 266-6286
WARREN	WARREN BOROUGH SANITARY AUTHORITY				
WARREN	YOUNGSVILLE MUNICIPAL AUTHORITY	(814) 563-4604			
WASHINGTON	BURGETTSTOWN SMITH TWP JOINT	(724) 796-1306			
WASHINGTON	CALIFORNIA BOROUGH SANITARY AUTHORITY	(724) 938-8878			
WASHINGTON	CARROLL TWP AUTHORITY	(724) 489-4493			
WASHINGTON	CECIL TWP MUNICIPAL AUTHORITY	(724) 746-4848			
WASHINGTON	CENTERVILLE BOROUGH SANITARY	(724) 632-2196			
WASHINGTON	CHARLEROI, BOROUGH OF, AUTHORITY	(724) 483-3585			
WASHINGTON	CHARTIERS TWP MUNICIPAL AUTHORITY				
WASHINGTON	CLAYSVILLE-DONEGAL JOINT	(724) 663-7770			
WASHINGTON	EAST BETHLEHEM TWP MUNICIPAL AUTHORITY	(724) 377-1777			
WASHINGTON	FALLOWFIELD TWP MUNICIPAL AUTHORITY	(412) 483-8700			
WASHINGTON	HANOVER TWP SEWER AUTHORITY	(724) 947-9109			
WASHINGTON	JEFFERSON TWP MUNICIPAL	(724) 947-2372			
WASHINGTON	MARIANNA BOROUGH MUNICIPAL AUTHORITY	(724) 267-4449			
WASHINGTON	MARIANNA-WEST BETHLEHEM JOINT	(724) 267-4375			
WASHINGTON	MCDONALD SEWAGE AUTHORITY	(724) 926-0133			
WASHINGTON	MID MON VALLEY WATER POLLUTION	(724) 326-4491			
WASHINGTON	MIDWAY SEWERAGE AUTHORITY	(724) 796-1116			
WASHINGTON	MONONGAHELA, CITY OF, MUN AUTHORITY	(724) 258-9598			
WASHINGTON	NEW EAGLE BOR MUNICIPAL SEWER AUTHORITY	(724) 258-4477			
WASHINGTON	NORTH FRANKLIN TWP	(724) 228-3330			
WASHINGTON	NORTH STRABANE TWP MUNICIPAL AUTHORITY	(724) 745-7220			
WASHINGTON	PETERS CREEK SANITARY AUTHORITY	(724) 348-6860			
WASHINGTON	PETERS TWP SANITARY AUTHORITY	(412) 941-6709			
WASHINGTON	PIGEON CREEK SANITARY AUTHORITY	(724) 239-2381			
WASHINGTON	ROSCOE BOROUGH MUNICIPAL AUTHORITY	(724) 938-7867			
WASHINGTON	SOUTH STRABANE TWP	(724) 225-9005			
WASHINGTON	VESTABURG-NEW HILL JOINT AUTHORITY	(724) 377-1636			
WASHINGTON	WASHINGTON-EAST WASHINGTON	(724) 225-1010			
WASHINGTON	WEST BROWNSVILLE MUNICIPAL	(724) 785-5533			
WASHINGTON	WEST PIKE RUN TWP MUNICIPAL	(724) 938-3226			
WAYNE	BEACH LAKE MUNICIPAL AUTHORITY	(570) 729-7529			
WAYNE	HAWLEY AREA AUTHORITY	(570) 226-2279			
WAYNE	HONESDALE MUNICIPAL AUTHORITY	(570) 253-2520			
WAYNE	MANCHESTER TWP SEWER	(570) 224-6077			
WAYNE	TEXAS TWP MUNICIPAL AUTHORITY				
WAYNE	WAYMART MUNICIPAL AUTHORITY	(570) 488-5350			
WESTMORELAND	ALLEGHENY TWP MUNICIPAL AUTHORITY	(724) 845-9355			
WESTMORELAND	AVONMORE, BORO OF, MUNICIPAL AUTHORITY	(724) 697-4222			
WESTMORELAND	BOLIVAR BOROUGH MUNICIPAL	(724) 676-5280			
WESTMORELAND	DERRY TWP MUNICIPAL				
WESTMORELAND	EAST HUNTINGDON TWP WATER	(724) 887-6141			
WESTMORELAND	EXPORT BOROUGH MUNICIPAL AUTHORITY				
WESTMORELAND	FRANKLIN TWP SANITARY AUTHORITY	(724) 327-1950			
WESTMORELAND	GREATER GREENSBURG SEWAGE AUTHORITY	(412) 837-1890			
WESTMORELAND	HEMPFIELD TWP MUNICIPAL AUTHORITY	(724) 834-8155			
WESTMORELAND	JEANNETTE, CITY OF, MUNICIPAL AUTHORITY	(724) 527-4022			
WESTMORELAND	KISKI VALLEY WATER POLLUTION	(412) 568-3655			
WESTMORELAND	LATROBE MUNICIPAL AUTHORITY	(724) 537-3378			
WESTMORELAND	LIGONIER TWP SANITARY AUTHORITY	(412) 238-7464			
WESTMORELAND	LOWER BURRELL, CITY OF,	(724) 337-8505			

## Information You Need for a Typical Wastewater Survey

Your local sewer authority generally has a survey form that must be completed to obtain a permit or provide annual sewer discharge information. Although the forms may differ in format, there is certain information that most sewer authorities request. This information has been compiled as a basic checklist for printers who may have to complete a wastewater survey for the first time.

### GENERAL INFORMATION

1. Standard Industrial Classification (SIC) \_\_\_\_\_
2. Number of Employees \_\_\_\_\_
3. Operating Schedule: Hrs./Day \_\_\_\_\_ Days/Week \_\_\_\_\_ Days/Year \_\_\_\_\_
4. Scheduled Shutdown Periods \_\_\_\_\_

### WATER AND WASTEWATER DATA

1. Name of water supply system \_\_\_\_\_

2. Water Sources	<u>Daily Flow (Gal./Day)</u>	3. Water Usage	<u>Daily Flow (Gal./Day)</u>
a. Municipal System	_____	a. Municipal System	_____
b. Private Wells	_____	b. Private Wells	_____
c. Recycled	_____	c. Recycled	_____
d. Other ( <i>specify</i> )	_____	d. Other ( <i>specify</i> )	_____
	<b>TOTAL:</b> _____	e. Plant Maintenance/Clean-up	_____
		f. Lawn/Grounds	_____
		g. Other ( <i>specify</i> )	_____
		<b>TOTAL:</b> _____	

4. Discharge Usage	<u>Daily Flow (Gal./Day)</u>
a. Municipal Sanitary Sewer	
(1) Process Waste	_____
(2) Sanitary Waste	_____
(3) Cooling Waste	_____
(4) Storm Water	_____
b. Natural Streams/Storm Sewers	_____
c. Waste Haulers/Septic Tanks	_____
d. Evaporative Ponds	_____

### OTHER PROCESS AND DISCHARGE DATA

1. Description of printing operations, including raw materials, products, wastes and flow diagrams.
2. Types and quantities of hazardous wastes sent offsite for disposal.
3. Schematic showing location of all sewer outlets. On the schematic, indicate the location of any existing sampling manholes or locations where samples may be collected.
4. List any pretreatment devices – silver recovery, neutralization, grease traps and oil/water separators.
5. List suspected or known chemicals in the wastewater discharge. For printers, these generally include: Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), oil and grease, total suspended solids (TSS), silver, zinc, copper, phenol, and any VOCs. The sewer authority will provide you with a list that you must review and check the appropriate chemicals.
6. Any wastewater tests and MSDSs for products discharged to the sewer, such as photochemicals, fountain solutions, etc.

## EPA TIER TWO INSTRUCTIONS

## GENERAL INFORMATION

Submission of this Tier Two form (when requested) is required by Title III of the Superfund Amendments and Reauthorization Act of 1986, Section 312, Public Law 99-499, codified at 42 U.S.C. Section 11022. The purpose of this Tier Two form is to provide State and local officials and the public with specific information on hazardous chemicals present at your facility during the past year.

## CERTIFICATION

The owner or operator or the officially designated representative of the owner or operator must certify that all information included in the Tier Two submission is true, accurate and complete. On the first page of the Tier Two report, enter your full name and official title. Sign your name and enter the current date. Also, enter the total number of pages included in the Confidential and Non-Confidential Information Sheets as well as all attachments. An original signature is required on at least the first page of the submission. Submissions to the SERC, LEPC, and fire department must each contain an original signature on at least the first page. Subsequent pages must contain either an original signature, a photocopy of the original signature, or a signature stamp. Each page must contain the date on which the original signature was affixed to the first page of the submission and the total number of pages in the submission.

**YOU MUST PROVIDE ALL INFORMATION REQUESTED ON THIS FORM TO FULFILL TIER TWO REPORTING REQUIREMENTS.**

This form may also be used as a worksheet for completing the Tier One form or may be submitted in place of the Tier One form.

## WHO MUST SUBMIT THIS FORM

Section 312 of Title III requires that the owner or operator of a facility submit their Tier Two form if so requested by a state emergency response commission, a local emergency planning committee, or a fire department with jurisdiction over the facility.

This request may apply to the owner or operator of any facility that is required, under regulations implementing the Occupational Safety and Health Act of 1970, to prepare or have available a Material Safety Data Sheet (MSDS) for a hazardous chemical present at the facility. MSDS requirements are specified in the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, found in Title 29 of the Code of Federal Regulations at 1910.1200.

This form does not have to be submitted if all of the chemicals located at your facility are excluded under Section 311(e) of Title III.

## WHAT CHEMICALS ARE INCLUDED

If you are submitting Tier Two forms in lieu of Tier One, you must report the required information on this Tier Two form for each hazardous chemical present at your facility in quantities equal to or greater than established threshold amounts (discussed below), unless the chemicals are excluded under Section 311(e) of Title III. Hazardous chemicals are any substance for which your facility must maintain an MSDS under OSHA's Hazard Communication Standard.

If you elect to submit Tier One rather than Tier Two, you may still be required to submit Tier Two information upon request.

## WHAT CHEMICALS ARE EXCLUDED

Section 311(e) of Title III excludes the following substances:

- (I) Any food, food additive, color additive, drug, or cosmetic regulated by the Food and Drug Administration;
- (II) Any substance present as a solid in any manufactured item to the extent exposure to the substance does not occur under normal conditions of use;
- (III) Any substance to the extent it is used for personal, family, or household purposes, or is present in the same form and concentration as a product packaged for distribution and

use by the general public;

- (IV) Any substance to the extent it is used in a research laboratory or a hospital or other medical facility under the direct supervision of a technically qualified individual;
- (V) Any substance to the extent it is used in routine agricultural operations or is a fertilizer held for sale by a retailer to the ultimate customer.

OSHA regulations, Section 1910.1200(b), stipulate exemptions from the requirement to prepare to have available an MSDS.

## REPORTING THRESHOLDS

Minimum thresholds have been established for Tier One/Tier Two reporting under Title III, Section 312. These thresholds are as follows:

For Extremely Hazardous Substances (EHSs) designated under Section 302 of Title III, the reporting threshold is 500 pounds (or 227 kg.) or the threshold planning quantity (TPQ), whichever is lower.

For all other hazardous chemicals for which facilities are required to have or prepare an MSDS, the minimum reporting threshold is 10,000 pounds (or 4,540 kg.).

You need to report hazardous chemicals that were present at your facility at any time during the previous calendar year at levels that equal or exceed these thresholds. For instructions on threshold determinations for components of mixtures, see "What About Mixtures?" on page 2 of these instructions.

A requesting official may limit the responses required under Tier Two by specifying particular chemicals or groups of chemicals. Such requests apply to hazardous chemicals regardless of established thresholds.

## INSTRUCTIONS

Please read these instructions carefully. Print or type all responses.

**WHEN TO SUBMIT THIS FORM**

Owners or operators of facilities that have hazardous chemicals on hand in quantities equal to or greater than set threshold levels must submit either Tier One or Tier Two forms by March 1.

If you choose to submit Tier One, rather than Tier Two, be aware that you may have to submit Tier Two Information later, upon request of any authorized official. You must submit the Tier Two form within 30 days of receipt of a written request.

**WHERE TO SUBMIT THIS FORM**

Send either a completed Tier One form or Tier Two form(s) to each of the following organizations:

1. Your State Emergency Response Commission.
2. Your Local Emergency Planning Committee.
3. The fire department with jurisdiction over your facility.

If a Tier Two form is submitted in response to a request, send the completed form to the requesting agency.

**PENALTIES**

Any owner or operator who violates any Tier Two reporting requirements shall be liable to the United States for a civil penalty of up to \$25,000 for each such violation. Each day a violation continues shall constitute a separate violation.

If your Tier Two responses require more than one page, use additional forms and fill in the page number at the top of the form.

**REPORTING PERIOD**

Enter the appropriate calendar year, beginning January 1 and ending December 31.

**FACILITY IDENTIFICATION**

Enter the full name of your facility (and company identifier where appropriate).

Enter the full street address or state road. If a street address is not available, enter other appropriate identifiers that describe the physical location of your facility (e.g., longitude and latitude). Include city, county, state and zip code.

Enter the primary Standard Industrial Classification (SIC) code and the Dun & Bradstreet number for your facility. The financial officer of your facility should be able to provide the Dun & Bradstreet number. If your firm does not have this information, contact the State or regional office of Dun & Bradstreet to obtain your facility number or have one assigned.

**OWNER/OPERATOR**

Enter the owner's or operator's full name, mailing address, and phone number.

**EMERGENCY CONTACT**

Enter the name, title, and work phone number of at least one local person or office who can act as a referral if emergency responders need assistance in responding to a chemical accident at the facility.

Provide an emergency phone number where such emergency information will be available 24 hours a day, everyday. The requirement

is mandatory. The facility must make some arrangement to ensure that a 24 hour contact is available.

**IDENTICAL INFORMATION**

Check the box indicating identical information, located below the emergency contacts on the Tier Two form, if the current chemical information being reported is identical to that submitted last year. Chemical descriptions, hazards, amounts, and locations must be provided in this year's form, even if the information is identical to that submitted last year.

**CHEMICAL INFORMATION: Description, Hazards, Amounts, and Locations**

The main section of the Tier Two form requires specific information on amounts and locations of hazardous chemicals, as defined in the OSHA Hazard Communication Standard.

If you choose to indicate that all of the information on a specific hazardous chemical is identical to that submitted last year, check the appropriate optional box provided at the right side of the storage codes and locations on the Tier Two form. Chemical descriptions, hazards, amounts, and locations must be provided even if the information is identical to that submitted last year.

- What units should I use?

Calculate all amounts as *weight in pounds*. To convert gas or liquid volume to weight in pounds, multiply by an appropriate density factor.

- What about mixtures?

If a chemical is part of a mixture, *you have the option* of reporting either the weight of the entire mixture or only the portion of the mixture that is a particular hazardous chemical (e.g., if a hazardous solution weighs 100 lbs. but is composed of only 5 percent of a particular hazardous chemical, you can indicate either 100 lbs. of the mixture *or* 5 lbs. of the chemical).

The option used for each mixture must be consistent with the option used in your Section 311 reporting.

Because EHSs are important to Section 303 planning, EHSs have lower thresholds. The amount of an EHS at a facility (both pure EHS substances and EHSs in mixtures) must be aggregated for purposes of threshold determination. It is suggested that the aggregation calculation be done as a first step in making the threshold determination. Once you determine whether a threshold for an EHS has been reached, you should report either the total weight of the EHS at your facility, or the weight of each mixture containing the EHS.

**CHEMICAL DESCRIPTION**

1. Enter the Chemical Abstract Service registry number (CAS). For mixtures, enter the CAS number of the mixture as a whole if it has been assigned a number distinct from its constituents. For a mixture that has no CAS number, leave this item blank or report the CAS numbers of as many constituent chemicals as possible.

If you are withholding the name of a chemical in accordance with criteria specified in Title III, Section 322, enter the generic class or category that is structurally descriptive

of the chemical (e.g., list toluene diisocyanate as organic isocyanate) and check the box marked Trade Secret. Trade secret information should be submitted to EPA and must include a substantiation. Please refer to EPA's final regulation on trade secrecy (53 FR 28772, July 29, 1988) for detailed information on how to submit trade secrecy claims.

2. Enter the chemical name or common name of each hazardous chemical.
3. Check box for ALL applicable descriptors: pure or mixture; and solid, liquid, or gas; and whether the chemical is or contains an EHS.
4. If the chemical is a mixture containing an EHS, enter the chemical name of each EHS in the mixture.

**EXAMPLE:**

You have pure chlorine gas on hand, as well as two mixtures that contain liquid chlorine. You write "chlorine" and enter the CAS number. Then you check "pure" and "mix" — as well as "liquid" and "gas".

**PHYSICAL AND HEALTH HAZARDS**

For each chemical you have listed, check all the physical and health hazard boxes that apply. These hazard categories are defined in 40 CFR 370.2. The two health hazard categories and three physical hazard categories are a consolidation of the 23 hazard categories defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Hazard Category Comparison  
For Reporting Under Sections 311 and 312**

EPA's Hazard Categories	OSHA's Hazard Categories
Fire Hazard	Flammable Combustion Liquid Pyrophoric Oxidizer
Sudden Release of Pressure	Explosive Compressed Gas
Reactive	Unstable Reactive Organic Peroxide Water Reactive
Immediate (Acute) Health Hazards	Highly Toxic Toxic Irritant Sensitizer Corrosive Other hazardous chemicals with an adverse effect with short term exposure
Delayed (Chronic) Health Hazard	Carcinogens Other hazardous chemicals with an adverse effect with long term exposure

**MAXIMUM AMOUNT**

1. For each hazardous chemical, estimate the greatest amount present at your facility on any single day during the reporting period.
2. Find the appropriate range value code in Table I.
3. Enter this range value as the Maximum Amount.

**Table I REPORTING RANGES**

Range Value	Weight Range in Pounds	
	From...	To...
01	0	99
02	100	999
03	1,000	9,999
04	10,000	99,999
05	100,000	999,999
06	1,000,000	9,999,999
07	10,000,000	49,999,999
08	50,000,000	99,999,999
09	100,000,000	499,999,999
10	500,000,000	999,999,999
11	1 billion	higher than 1 billion

If you are using this form as a worksheet for completing Tier One, enter the actual weight in pounds in the shaded space below the response blocks. Do this for both Maximum Amount and Average Daily Amount.

**EXAMPLE:**

You received one large shipment of a solvent mixture last year. The shipment filled five 5,000 gal storage tanks. You know that the solvent contains 10 percent benzene, which is a hazardous chemical.

You figure that 10 percent of 25,000 gallons is 2,500 gallons. You also know that the density of benzene is 7.29 pounds per gallon, so you multiply 2,500 gallons by 7.29 pounds per gallon to get a weight of 18.225 pounds.

Then you look at Table I and find that the range value 04 corresponds to 18.225. You enter 04 as the Maximum Amount.

(If you are using the form as a worksheet for completing a Tier One form, you should write 18.255 in the shaded area.)

**AVERAGE DAILY AMOUNT**

1. For each hazardous chemical, estimate the average weight in pounds that was present at your facility during the year. To do this, total all daily weights and divide by the number of days the chemical was present on the site.
2. Find the appropriate range value in Table I.
3. Enter this range value as the Average Daily Amount.

**EXAMPLE:**

The 25,000 gal shipment of solvent you received last year was gradually used up and completely gone in 315 days. The sum of the daily volume levels in the tank is 4,536,000 gallons. By dividing 4,536,000 gallons by 315 days onsite, you calculate an average daily amount of 14,400 gallons.

You already know that the solvent contains 10 percent benzene, which is a hazardous chemical. Since 10 percent of 14,400 is 1,440, you figure that you had an average of 1,440 gallons of benzene. You also know that the density of benzene is 7.29 pounds per gallon, so you multiply 1,440 by 7.29 to get a weight of 10,500 pounds.

Then you look at Table I and find that the range value 04 corresponds to 10,500. You enter 04 as the Average Daily Amount.

(If you are using the form as a worksheet for completing Tier One form, you should write 10,500 in the shaded area.)

**NUMBER OF DAYS Onsite**

Enter the number of days that the hazardous chemical was found onsite.

**EXAMPLE:**

The solvent composed of 10 percent benzene was present for 315 days at your facility. Enter 315 in space provided.

**STORAGE CODES AND STORAGE LOCATIONS**

List all non-confidential chemical locations in the column, along with storage types/ conditions associated with each location. Please note that a particular chemical may be located in several places around the facility. Each row of boxes followed by a line represents a unique location for the same chemical.

**Storage Codes:** Indicate the types and conditions of storage present:

- a. Look at Table II. For each location, find the appropriate storage type and enter the corresponding code in the first box.
- b. Look at Table III. For each location, find the appropriate storage types for pressure and temperature conditions. Enter the applicable pressure code in the second box. Enter the applicable temperature code in the third box.

**Table II - STORAGE TYPES**

<u>CODES</u>	<u>Types of Storage</u>
A	Above ground tank
B	Below ground tank
C	Tank inside building
D	Steel drum
E	Plastic or nonmetallic drum
F	Can
G	Carboy
H	Silo
I	Fiber drum
J	Bag
K	Box
L	Cylinder
M	Glass bottles or jugs
N	Plastic bottles or jugs
O	Tote bin
P	Tank wagon
Q	Rail car
R	Other

**Table III - PRESSURE AND TEMPERATURE CONDITIONS**

<u>CODES</u>	<u>Storage Conditions</u> (PRESSURE)
1	Ambient pressure
2	Greater than ambient pressure
3	Less than ambient pressure

	(TEMPERATURE)
4	Ambient temperature
5	Greater than ambient temperature
6	Less than ambient temperature but not cryogenic
7	Cryogenic conditions

**EXAMPLE:**

The benzene in the main building is kept in a tank inside the building, at ambient pressure and less than ambient temperature.

Table II shows you that the code for a tank inside a building is C. Table III shows you that the code for ambient pressure is 1, and the code for less than ambient temperature is 6.

You enter:      C      1      6

**STORAGE LOCATIONS:**

Provide a brief description of the precise location of the chemical, so that emergency responders can locate the area easily. You may find it advantageous to provide the optional site plan or site coordinates as explained below.

For each chemical, indicate at a minimum the building or lot. Additionally, where practical, the room or area may be indicated. You may respond in narrative form with appropriate site coordinates or abbreviations.

If the chemical is present in more than one building, lot, or area location, continue your responses down the page as needed. If the chemical exists everywhere at the plant site simultaneously, you may report that the chemical is ubiquitous at the site.

Optional attachments: If you choose to attach one of the following, check the appropriate Attachments box at the bottom of the Tier Two form.

- a. A site plan with site coordinates indicated for buildings, lots, areas, etc. throughout your facility.
- b. A list of site coordinate abbreviations that correspond to buildings, lots, areas, etc. throughout your facility.
- c. A description of dikes and other safeguard measures for storage locations throughout your facility.

**EXAMPLE:**

You may have benzene in the main room of the main building, and in tank 2 in tank field 10. You attach a site plan with coordinates as follows: main building = G-2, tank field 10 = B-6. Fill in the Storage Location as follows:

B-6 [ Tank 2 ] G-2 [Main Room]

**CONFIDENTIAL INFORMATION**

Under Title III, Section 324, you may elect to withhold location information on a specific chemical from disclosure to the public. If you choose to do so:

- Enter the word "confidential" in the Non-Confidential Location section of the Tier Two form on the first line of the storage locations.
- On a separate Tier Two Confidential Location Information Sheet, enter the name and CAS number of each chemical for which you are keeping the location confidential.
- Enter the appropriate location and storage information, as de-

## ***COMMUNITY RIGHT-TO-KNOW***

## ***THE GREEN INK ROOM***

scribed above for non-confidential locations.

- Attach the Tier Two Confidential Location Information Sheet to the Tier Two form. This separates confidential locations from other information that will be disclosed to the public.

### **CERTIFICATION**

Instructions for this section are included on page one of these instructions.



<p><b>Tier Two EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY</b></p> <p><i>Specific Information by Chemical</i></p>	<p><b>Facility Identification</b></p> <p>Name <u>      </u> Cyan Printing Company                  Street <u>37 Magenta Road</u>                  City <u>Phila</u> County <u>      </u> State <u>PA</u> Zip <u>19111-1234</u>                  SIC Code <u>2759</u> Dun &amp; Brad Number <u>32-45678</u></p> <p>FOR OFFICIAL USE ONLY</p> <p>ID# <u>      </u>                  Date Received <u>      </u></p>	<p><b>Owner/Operator Name</b></p> <p>Name <u>      </u> Cyan Printing Company Phone <u>215-999-9999</u>                  Mail Address <u>37 Magenta Road</u>  <u>Phila, PA 19111-1234</u></p> <p><b>Emergency Contact</b></p> <p>Name <u>Al Yellow</u> Title <u>President</u>                  Phone <u>215-999-9999</u> 24 Hr. Phone <u>215-999-9999</u>                  Name <u>Ed Black</u> Title <u>Press Foreman</u>                  Phone <u>215-999-1234</u> 24 Hr. Phone <u>215-888-8888</u></p>
<p><b>Important: Read all instructions before completing form</b> Reporting Period From January 1 to December 31, 19 <u>98</u></p> <p>[ ] Check if information below is identical to the information submitted last year.</p>		

Chemical Description	Physical and Health Hazards (check all that apply)	Inventory	Container Type	Pressure	Temperature	Storage Codes and Locations (Non-Confidential) Storage Locations
CAS <u>      </u> Trade <u>      </u> Chem. Name <u>Nonheatset Black Ink</u> Secret <u>      </u> Check all that apply [ ] [X] [ ] [ ] [ ] [ ] Pure Mix Solid Liquid Gas EHS EHS Name <u>      </u>	<input checked="" type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input type="checkbox"/> Delayed (chronic)	Max. Daily Amount (code) <u>0</u> <u>4</u> Avg. Daily Amount (code) <u>0</u> <u>4</u> No. of Days On-site (days) <u>3</u> <u>6</u> <u>5</u>	A	1	4	Storage Tank in Pressroom
CAS <u>      </u> Trade <u>      </u> Chem. Name <u>Color Soy Inks</u> Secret <u>      </u> Check all that apply [ ] [X] [ ] [ ] [ ] [ ] Pure Mix Solid Liquid Gas EHS EHS Name <u>      </u>	<input checked="" type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input type="checkbox"/> Delayed (chronic)	Max. Daily Amount (code) <u>0</u> <u>3</u> Avg. Daily Amount (code) <u>0</u> <u>3</u> No. of Days On-site (days) <u>3</u> <u>6</u> <u>5</u>	D F	1 1	4 4	Containers (1 lb to 55 gallons) in Ink Storage Room off Pressroom
CAS <u>      </u> Trade <u>      </u> Chem. Name <u>Liquid Propane</u> Secret <u>      </u> Check all that apply [ ] [X] [ ] [ ] [ ] [ ] Pure Mix Solid Liquid Gas EHS EHS Name <u>      </u>	<input checked="" type="checkbox"/> Fire <input checked="" type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input type="checkbox"/> Delayed (chronic)	Max. Daily Amount (code) <u>0</u> <u>2</u> Avg. Daily Amount (code) <u>0</u> <u>2</u> No. of Days On-site (days) <u>3</u> <u>6</u> <u>5</u>	A	2	4	Propane Tank behind Shop

**Certification (Read and sign after completing all sections)**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in pages one through       , and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner/operator OR owner/operator's authorized representative        Signature        Date signed       

**Optional Attachments**

[ ] I have attached a site plan  
 [ ] I have attached a list of site coordinate abbreviations  
 [ ] I have attached a description of dikes and other safeguard measures

**HAZARDOUS SUBSTANCE SURVEY FORM**  
**Worker and Community Right to Know Program: Option 1**

**PART I**

<b>1. NAME OF COMPANY</b> Green Printing Company		<b>2. FEDERAL EMPLOYER IDENTIFICATION NUMBER</b> <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">2</td> <td style="width: 20px; text-align: center;">8</td> <td style="width: 20px; text-align: center;">-</td> <td style="width: 20px; text-align: center;">6</td> <td style="width: 20px; text-align: center;">3</td> <td style="width: 20px; text-align: center;">1</td> <td style="width: 20px; text-align: center;">5</td> <td style="width: 20px; text-align: center;">3</td> <td style="width: 20px; text-align: center;">7</td> <td style="width: 20px; text-align: center;">9</td> </tr> </table>			2	8	-	6	3	1	5	3	7	9
2	8	-	6	3	1	5	3	7	9					
<b>3. DIVISION OR PLANT NAME</b> Same		<b>4. WORKPLACE COVERED BY THIS FORM</b> Same												
<b>5. STREET ADDRESS OF WORKPLACE</b> 1360 Cyan Avenue		<b>CITY</b> Claremont	<b>STATE</b> PA	<b>ZIP CODE</b> 17999										
<b>6. MAILING ADDRESS (IF DIFFERENT)</b>														
<b>7. TELEPHONE NUMBER</b> (215) 555-1000		<b>8. COUNTY NAME</b> Montgomery		<b>COUNTY CODE</b> 46										
<b>9. NAME OF EMPLOYER OR EMPLOYER REPRESENTATIVE</b> John G. Black		<b>TITLE</b> Plant Supervisor		<b>DATE</b> 3/2/99										
<b>10. BUSINESS ADDRESS OF SIGNATORY</b> Same														
<b>11. ALL HAZARDOUS SUBSTANCES PRESENT AT WORKPLACE DURING PRIOR YEAR: FROM 1/1/98 THRU 12/31/98</b>														
<b>12. SIGNATURE OF EMPLOYER OR EMPLOYER REPRESENTATIVE</b>														

E .. INDICATES ENVIRONMENTAL HAZARDS

S .. INDICATES SPECIAL HAZARDOUS SUBSTANCE

		CHEMICAL ABSTRACTS SERVICE NUMBER (A)	LIST PRODUCT NAME, THEN LIST THE CHEMICAL NAME OF HAZARDOUS INGREDIENT(S) (B)	PHYSICAL AND HEALTH HAZARD(S)* (C) (Check all that apply)				
				FIRE	SUDDEN RELEASE OF PRESSURE	REACTIVITY	IMMEDIATE (ACUTE)	DELAYED (CHRONIC)
E			CC Blanket Wash	X			X	
E		78-93-3	2-Butanone	X			X	
E	S	50-00-0	Formaldehyde	X			X	X

\*Physical and health hazards (fire, sudden release of pressure, reactivity, immediate or acute, delayed or chronic) may be found on the product label and Material Safety Data Sheet.



## Additional Resources

Pennsylvania Department of Environmental Protection	
Southeast Regional Office - Conshohocken	610-832-6021
Northeast Regional Office - Wilkes Barre	570-826-2475
Southcentral Regional Office - Harrisburg	717-705-4797
Northcentral Regional Office - Williamsport	570-327-0537
Southwest Regional Office - Pittsburgh	412-442-4194
Northwest Regional Office - Meadville	814-332-6816
Office of Pollution Prevention and Compliance Assistance (OPPCA)	717-783-0540
Small Business Ombudsman	717-772-5942
Pennsylvania Department of Labor and Industry	
General Information	717-787-5279
SARA Title III Information and Guidance Materials	717-783-2071
Pennsylvania Emergency Management Council (PEMC)	
Emergency Notification for Releases	1-800-424-7362
	717-651-2001
General Information, SARA Title III Information and Guidance Materials	717-651-2001
DEP Statewide Emergency Response	1-800-541-2050
Philadelphia Air Management Services	215-685-7580
Allegheny County Health Department in Pittsburgh (Air Permitting Group)	412-578-8140
OSHA Consultation Service	
Indiana University of Pennsylvania	
Safety Sciences Department 205 Uhler Hall	
Indiana, Pennsylvania 15705-1087	
724-357-2561	
US Environmental Protection Agency (EPA)	
Region 3 Office	215-814-5000
Region 3 Small Business Liaison	1-800-228-8711/215-566-6683
Region 2 Small Business Liaison	212-637-3417
National Response Center (spill response)	1-800-424-8802
Small Business Ombudsman	1-900-368-5098
Center for Environmental Research information	513-569-7562
Indoor Air Quality Information Clearinghouse	1-800-438-4318
EPA Energy Star	1-888-782-7937
Safe Drinking Water	1-800-426-4791
Wastewater/Small Flows Clearinghouse (West Virginia University)	1-800-624-8301
Pollution Prevention Information Clearinghouse	202-260-7788
National Solid and Hazardous Waste Ombudsman	202-260-9361
Solid and Hazardous Waste (RCRA)	1-800-424-9346
Right to Know Title III (EPCRA)	703-412-9877
Toxic Substances Control Act and Asbestos Information	202-554-1404
EPA Waste Wi\$e/Waste Reduction	1-800-372-9473
Office of Environmental Justice	1-800-962-6215

**ADDITIONAL RESOURCES****THE ORANGE INK ROOM**

Office of Pollution Prevention/Toxics/Small Business Liaison	202-260-2983
National Center for Environmental Research for Small Business	1-800-490-9194
<b>Other Hotlines</b>	
ENVIROHELP (free compliance visits, seminars & more)	1-800-722-4743
Recycling Hotline	1-800-263-2687
Small Business Administration	1-800-827-5722
Occupational Safety & Health Administration (OSHA) (Worker Safety Referral Service)	1-800-321-6742
CHEMTREC (Chemical Manufacturers Association) (Emergency Response)	1-800-262-8200
Graphic Arts Association (GAA)	215-396-2300
Graphic Arts Technical Foundation (GATF)	412-741-6860
Screen Printing & Graphic Imaging Association (SCGIA)	703-359-1313
Printers National Environmental Assistance Center (PNEAC)	1-888-USPNEAC
National Association of Printers and Lithographers	(Washington, DC) 202-682-3001 (NJ) 800-642-6275
Gravure Association of America	716-436-2150
Flexographic Technical Association	(Ronkonkoma, NY) 516-737-6020 (Levittown, NY) 516-935-7241
Screenprinting and Graphic Imaging Association	703-385-1335
National Association of Quick Printers	312-644-6610
Environmental Conservation board of the Graphic Communications Industries	703-648-3218
National Association of Printing Ink Manufacturers	201-634-9600
Institute of Advanced Manufacturing Sciences (Center for Applied Environmental Technologies)	513-948-2000
Pennsylvania Technical Assistance Program (Penn State University)	814-865-0427
University of Pittsburgh (Applied Research Center)	412-624-4141
Green and Profitable Printing Solid and Hazardous Waste Education Center	608-262-0385
Small Business Development Centers (SBDC) (Univ. of Pennsylvania)	215-573-7555
<b>Internet Websites</b>	
Printers' National Environmental Assistance Center (PNEAC)	<a href="http://www.pneac.org">www.pneac.org</a>
Pennsylvania Department of Environmental Protection DEP World Wide Web Site	<a href="http://www.dep.state.pa.us">www.dep.state.pa.us</a>

## ***THE ORANGE INK ROOM***

## ***ADDITIONAL RESOURCES***

To Request Publications  
Ask Questions About DEP  
Environmental Protection Update  
Clean Air Information  
Send Comments On Regulations  
DEP Citizens Advisory Council

DEPINFO@dep.state.pa.us  
ASKDEP@dep.state.pa.us  
DEPUPDATE@dep.state.pa.us  
CleanAir@dep.state.pa.us  
RegComments@dep.state.pa.us  
Wilson.Susan@dep.state.pa.us

U.S. Environmental Protection Agency (EPA) [www.epa.gov](http://www.epa.gov)

U.S. Environmental Protection Agency (EPA) (Small Business Ombudsman) [www.epa.gov/sbo](http://www.epa.gov/sbo)

U.S. Occupational Safety & Health Administration (OSHA) [www.osha.gov](http://www.osha.gov)

Small Business Environmental Home Page [www.smallbiz-enviroweb.org](http://www.smallbiz-enviroweb.org)

Enviro\$en\$e (home page for P2 case studies & more) [www.seattle.batelle.org/es-guide/print/print.html](http://www.seattle.batelle.org/es-guide/print/print.html)

Graphic Arts Technical Foundation (GATF) [www.gatf.lm.com/](http://www.gatf.lm.com/)

Printing Industries of America (PIA) [www.printing.org](http://www.printing.org)

National Association of Printers and Lithographers (NAPL) [www.napl.org](http://www.napl.org)

Screenprinting and Graphic Imaging Association (SGIA) [www.sgia.com](http://www.sgia.com)

US Screen Printing Institute [www.uscreen.com](http://www.uscreen.com)

WAZZU P2 Environmental Resource Information Center [www.wsu.edu:8080/~wazzup2/wazzu.htm](http://www.wsu.edu:8080/~wazzup2/wazzu.htm)  
(links to numerous sites and P2 TECH archives)

### Listservers

PrinTech & PrintReg (free online discussions and resources for printers)

P2Tech (free online discussions and resources for any industry) [owner-p2tech@great-lakes.net](mailto:owner-p2tech@great-lakes.net)

### **Other documents which may help you:**

Pollution Prevention Manual for Lithographic Printers, published by Iowa Waste Reduction Center, University of Northern Iowa (319) 273-2079

A Guide for Photo Processors, A Guide for Lithographic Printers, A Guide for Screen Printers, published by Washington State Department of Ecology (206) 649-7000

Financing Pollution Prevention Investments: A Guide for Small and Medium-Sized Business, published by NE USEPA and Northeast Waste Management Officials' Association (NEWMOA) (617) 367-8558

Interactive CD-ROM on Technical Assistance with Pollution Prevention in the Printing Industry, published by Northeast Waste Management Officials' Association (NEWMOA) (617) 367-8558

Source Book '96 - Official Phone Book of the Printing Industry, Graphic Arts Monthly, 212-463-6828